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ORIGINAL ARTICLES.

NASAL FIBROMATA.

Read before the Section on Laryngology of the Ninth International Medical Congress, Washington, D. C., September, 1887.

BY W. E. CASSELBERRY, M.D.,

OF CHICAGO, ILL.

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS, AND OF LARYNGOLOGY AND RHINOLOGY, IN THE CHICAGO MEDICAL COLLEGE, MEDICAL DEPARTMENT OF THE NORTHWESTERN UNIVERSITY.

Under this title it is proper to include only neoplasms of a purely fibrous or predominating fibrous structure which originate in the nasal fossæ anterior to the naso-pharynx. Tumors in this situation are prone to assume a compound type, *e.g.*, the fibro-myxomata and the fibro-sarcomata. The scope of this paper will not permit of consideration of these, notwithstanding their intimate relationship to the fibromata. Likewise of fibromata which originate in the neighboring sinuses, and which involve the nose only secondarily, must such meagre mention suffice as is essential to the elucidation of the nasal growths proper.

Recent literature has contained numerous reports of cases of *naso-pharyngeal* fibromata, recounting the various operative procedures for their removal, including preliminary subperiosteal resection, resection of the hard palate by Gussenbauer, osteoplastic resection of the superior maxilla by Langenbeck, Rouge's operation and the recent method by Furneau-Jordan. Nor have rhinologists failed to emphasize the advantages of the intra-nasal or intra-pharyngeal galvano-cautery method as I will urge in nasal cases the use of similar means in preference to the other graver, disfiguring, and sometimes fatal operations.

Fibromata originating primarily in the nose anterior to the naso-pharynx are comparatively rare. The *Internationales Centralblatt für Laryngologie, Rhinologie und verwandte Wissenschaften*, a journal of abstracts of all current literature pertaining to these departments, does not contain a report of a single case during the last three years.

None are included in 265 cases of nasal neoplasm reported by Hopman, of Cologne (248 cases), and Schimegelaw, of Copenhagen (17 cases). Of this series there were 121 myxomata, 63 myxomatous hypertrophies of turbinated bodies, 24 papillomata, 1 lupus and 1 sarcoma.

Yet their occasional occurrence has been recognized probably from the time of Hippocrates, who had a large experience in connection with nasal polypi. "In cases of *hard* polypi Hippocrates[1] directed that the nostril should be slit open in order that the tumor might be thoroughly extirpated, and the roots afterwards destroyed by the hot iron."

Celsus[2] treated polypi in various ways, but he strongly disapproved of meddling with the *harder* tumors, which he considered malignant.

Modern authors treat briefly of the subject. Stoerk[3] mentions fibromata as originating from the submucous structures. Cohen[4] briefly but lucidly describes the neoplasm and mentions its comparative infrequency. Sajous[5] mentions the roof as its favorite site in the nose, but remarks that cases have been reported in which fibrous polypi sprang from the septum, the inferior turbinated bones, and even the floor of the nose. He further notes the rarity of its primary occurrence.

Wagner[6] writes: "Fibromata may develop in any portion of the nasal cavity: the floor of the fossæ, the turbinated bones, or lateral walls," and reports two cases.

Robinson[7] thinks it so unusual in the nose and so usual in the naso-pharynx that he considers difference in location a point in diagnosis between fibroma and myxoma.

Mackenzie[8] has reported a single case of his own and two others probably fibromata, and remarks in this connection: "Though fibrous polypus of the naso-pharynx is not unfrequently met with, this form of tumor extremely seldom originates in the nose itself; the only case, so far as I am aware, in which such a growth has been proved to exist being one of my own. There are, however, two other instances in which there is every reason to believe the tumors were fibromatous." It seems probable, however, that nasal fibromata are really more numerous than the few cases recently reported would indicate—a probability which tends to enhance our interest in the subject.

Growths in the nose and naso-pharynx in a measure correspond in type to the structural elements of the tissue from which they originate. The nasal mucous membrane consists of two layers: a superfi-

[1] De Morbis, lib. ii, Lettré's Ed. Paris, 1851, vol. ii, p. 51. Mackenzie, Diseases of the Throat and Nose, Wood's Ed., vol. ii, p. 245.
[2] De Comt. pharm. sec. locos., lib. iii, cap. iii, Mackenzie's, loc. cit.
[3] Klinik der Krankheiten des Kehlhopfs, der Nase und des Rachens, S. 90.
[4] Diseases of the Throat and Nasal Passages. 1880, p. 392.
[5] Diseases of the Nose and Throat. 1885, p. 146.
[6] Diseases of the Nose. 1884, p. 134.
[7] Nasal Catarrh and Allied Diseases. 1885, p. 256.
[8] Mackenzie. Diseases of the Throat and Nose. Am. Ed. ii, p. 375.

cial mucous stratum which is covered by epithelium, and a deep fibrous layer which has the position and functions of periosteum and perichondrium.[9] In the upper or olfactory tract these two strata are closely adherent, while in the lower or respiratory tract they are separated by variable quantities of connective tissue. The fibrous layer has been shown by Panas[10] to be especially abundant and more densely fibrous at the upper and posterior part of the septum and the immediately adjoining space on the base of the skull, hence the frequency of naso-pharyngeal fibromata, while in the anterior nares it is least abundant, and hence the more common occurrence in this location of the myxomata. Further, between these sites, around the posterior nares, the membrane presents a kind of transitional form, and growths in this situation are likely to present a corresponding fibro-mucous type. This observation, in connection with the assertion of Stoerk[11] that polypi arising from the mucosa (superficial layer) are of mucous structure, while those arising from the submucosa or periosteum are fibrous, affords a reasonable explanation of the comparative infrequency of true nasal fibromata. True, the attachments of ordinary myxomata are sometimes traceable to the periosteum or to the bone, but it is probable that they have first originated in the superficial mucosa and only subsequently penetrated to the deeper structures; or else, as Woakes[12] suggests, they have taken deep origin from the mucous elements which dip into and line the cells of the spongy bones.

Nelaton, cited by P. Koch,[13] has advanced the opinion that fibrous polypi of the nose are never of a primary nature, but always proceed from neighboring sinuses, *e. g.*, the antrum of Highmore, etc. A practical refutation of this theory is furnished by a case reported by Gerdy in which, on post-mortem examination, a fibroma was found to be attached to the posterior part of the vault of the left nasal fossa.

Fibromata may arise from any part of the nasal cavities. The vault, especially its posterior portion, is the favorite site, since here is found in greater abundance the fibrous stratum from which they primarily originate, but the turbinated bodies, the cribriform plate of the ethmoid bone, the septum, and the floor of the nose may furnish points of origin. More or less extensive secondary adhesions may form in the course of the expansion of the growth as the result of friction and pressure, so that it is sometimes difficult to determine the original point of attachment.

Of the accessory cavities the antrum of Highmore is a favorite site of origin, fibromata in which become very large and encroach secondarily upon the cavities of the nose and orbits, and next in order are the frontal sinuses, tumors from which extend into the same cavities.

The etiological factors in the development of fibromata are not definitely known, but a local irritation from traumatism may serve to excite a hyperplasia of the fibrous elements, as in one case of fibroma of the septum which was directly attributable to a blow on the nose. In other instances a localized perversion of the chronic hypertrophic inflammatory process may act as the exciting cause by stimulating the fibrous elements to unusual proliferation.

Both sexes and all ages seem equally liable. In this respect the disease differs from naso-pharyngeal fibroma, of which Lincoln[14] collates 38 genuine cases, all of them males under 25 years of age. Nelaton,[15] cited by Mackenzie, knew of no example of *naso-pharyngeal* fibroma becoming developed in a female of any age or in a male over 35. Of six cases of nasal fibroma collected in this paper three were females, one of 35 years, one of 39 years and one of 50 years of age.

The rapidity of growth, as indicated by the duration of the symptoms up to the time of operation, averages about two years. The early symptoms are those of a catarrhal nature, followed by obstruction and distension of the fossa. Its development continues to the detriment of bones or cartilages that may be in the way. These are absorbed, enveloped and rent asunder, the neoplasm penetrating into fissures, accessory sinuses and neighboring cavities. The bridge of the nose is flattened, the eyes bulged forward and the cheeks swollen, the whole constituting the hideous deformity known as "frog-face." Frequent and dangerous attacks of epistaxis may proceed from surface ulcerations. Extension upward may open the cranial cavity.

A probable diagnosis is not difficult. Its appearance *in situ* differs much from that of the mucous polyp. It is not multiple, but may be lobulated. The base is broad, the color is dark red, there is no translucency, and it is firm and resistant to pressure by a probe. It is more difficult to distinguish it thus from fibro-sarcoma and sarcoma. The microscope is the only means of positive diagnosis.

Fibrous tumors in this situation present the ordinary pathological characters of fibromata in general, In consistence they vary, being sometimes very dense and at other times softer and more succulent. The fibres which constitute the chief part of the growth are grouped in bundles of various sizes, or are simply closely interlaced and devoid of definite arrangement. A few minute cells, either round or spindle-shaped, may be present among the fibres or in larger numbers around the blood-vessels. The vessels are not usually numerous, but it is probable that the tumors, or parts of them, may partake at times of the erectile structure of the turbinated bodies. A smooth fibrous capsule usually envelops the whole.

Concerning the prognosis, nasal fibroma tends to degenerate into sarcoma when it is incompletely removed, or even without any interference. There is a tendency to recurrence after removal, although, if thoroughly extirpated and the base cauterized to the bone, the prognosis should be good.

[9] Mackenzie. Am. Ed. ii, p. 238.
[10] Bull. de la Soc. de Chir., 1873. Mackenzie. Diseases of the Throat and Nose. Wood's Ed., vol. ii, p. 368.
[11] Die Krankheitender Nase, 1880, S. 90.
[12] Nasal Polypus, etc., in Relation to Ethmoiditis, 1887, p. 9.
[13] Internationales Centralblatt für Laryngologie, Rhinologie und verwandte Wissenschaften, December, 1885, p. 256.
[14] Archives of Laryngology, October, 1883, p. 258.
[15] Rapport sur les Progrès de la Chirurgie, Paris, 1867, p. 235. Mackenzie. Diseases of the Throat and Nose, vol. ii, p. 497, Am. Ed.

I have tabulated and appended the records of eight cases, including one of my own which is also related in detail:

Mrs. R., æt. 39 years, first had a nasal polypus described as an ordinary myxoma removed from the left nasal fossa, by means of forceps, about ten years ago. She remained well for five years and then again noticed gradually increasing obstruction, and later a dark reddish mass presenting at the left anterior nasal aperture. Four years ago she submitted to operation under chloroform. The operation was a failure, only a few small pieces being removed by means of forceps and without the aid of artificial illumination. Severe hæmorrhage was occasioned at the time and continued intermittently for weeks. No relief was afforded. She declined further interference until February, 1886, at which time she came under the observation of Dr. W. T. Coleman and Dr. A. P. Gilmore, of Chicago, through whose kindness I have a portion of the record. The left nostril was much distended, showing evidence of commencing frog-face, and the fossa anteriorly was thoroughly filled in all directions by a firm elastic tumor which projected slightly from the anterior aperture. There was no undue prominence over the antrum of Highmore, nor encroachment upon the orbit. These gentlemen operated skilfully by means of the galvano-cautery. Efforts to include the neoplasm failed on account of its large size, tight fit and numerous adhesions. So the lower portion was slit up by the knife electrode, some adhesions separated in like manner, and a large section, perhaps one-half of the tumor, extracted by means of forceps. The operation was necessarily prolonged, painful and bloody. Through the courtesy of Dr. Coleman, the case was now referred to me.

Status Præsens.—Examination about ten days subsequent to the operation just described, March 4, 1886. The left half of the external nose is decidedly more prominent than the right. The left nasal fossa above the line of the inferior turbinated body is completely filled by a firm, elastic, irregularly lobulated neoplasm. No middle turbinated body is discernible, its position being occupied by tumor. The inferior meatus is free, corresponding to the portion of the growth already removed. The anterior two-thirds of the septum narium has been pressed far over to the right, narrowing the right fossa and enormously increasing the capacity of the left chamber. Rhinoscopic inspection posteriorly shows the nasopharynx to be approximately normal. Only a faint outline of the tumor, located well forward, can be seen through the left choana. The posterior part of the septum is in the median line.

First Operation, March 10, 1886.—The affected nostril was first thoroughly cleansed by cotton swabbing and by means of a condensed air spray of Dobell's solution. The parts were illuminated by the ordinary method of reflected gas rays projected through the anterior aperture, which was widely dilated by a bivalve speculum. Complete local anæsthesia of the entire nostril was induced by hydrochlorate of cocaine applied in the form of a spray of a 5 per cent. solution repeated three or four times at intervals of three minutes, followed by a 10 per cent. solution on cotton introduced and allowed to remain in contact with the fibroma for three minutes. I employed Flemming's galvano-cautery écraseur, devised by Seiler, which consists of a universal handle into which is inserted a pair of parallel tubes threaded with wire. The ends of the wire fall through eyelets, one on each side of the wheel in the axle-bar of the windlass, which is inserted into a slot in the handle so located that while holding the handle the loop can be wound in on the windlass by means of the thumb. I substituted steel or a tempered iron wire (piano wire No. 5) for the platinum usually employed. Platinum is devoid of resiliency, a property that enables the écraseur loop of steel wire to retain or regain its contour after contact, when one of platinum would remain permanently indented. The steel loop offers some resistance to tissues against which it is pressed, thus facilitating envelopment of the part. The steel wire is sufficiently tenacious and takes the glow from the battery practically as well as platinum, but a fresh piece must be used at each application. Before threading the parallel tubes it is well to withdraw the temper from the ends of the wire by heating them to redness, as the portion thus rendered ductile will wind more easily around the windlass.

I would catch in the écraseur the most easily enveloped lobule or corner of the growth, then connect the battery by running down the treadle with my foot, and at the same time wind in the loop, thus severing, without pain and with little or no hæmorrhage, a cubic centimetre or more of the growth. By a repetition of the process three or four such pieces would be removed in a sitting. Occasionally it became necessary to make a preliminary incision into the substance of the tumor with the knife electrode in order to prepare a place for the wire, or by the same means to detach an adhesion that the écraseur might take hold. The operations were repeated weekly, the patient using a cleansing spray in the interval. They might have been performed more frequently, every day or every alternate day for a time, thus shortening the duration of treatment, but the slower method sufficed and for good reason was preferable in this case.

During the course of some weeks the growth was thus followed up to its primary attachments, which extended along the horizontal plate of the ethmoid bone backward to the anterior surface of the body of the sphenoid. I regard the posterior portion of the vault, including the anterior perpendicular surface of the sphenoid bone, as the point of origin of the tumor, the base of which extended thence along the cribriform plate of the ethmoid bone, becoming adherent at the same time to portions of the superior turbinated body and the walls of the ethmoid cells. The absence of the middle turbinated body, which had been reduced to a rudiment by absorption from pressure, permitted more brilliant illumination of the parts above and not only facilitated operation, but enabled me with certainty to follow the tumor to its base. After the removal of all portions which could be included in the snare, I cauterized the base by means either of the galvano-cautery point, knife, or moxa electrode, causing the instrument to penetrate

TABLE OF OPERATIONS FOR NASAL FIBROMATA.

No. Date.	Operator and Reference.	Sex.	Age.	Previous Duration of Symptoms.	Situation and Extent.	Point of Attachment.	Pathological Nature.	Treatment.	Result.
1. 1833.	Gerdy. Des Polypes et de leur treatment, Paris, 1833, p. 19. Mackenzie: Dis. of Throat and Nose, Vol. II, p. 375, Am. Ed.	Male.	13	1½ yrs.	Left Nostril.....	Posterior part of the vault of the left nasal fossa. Demonstrated by an autopsy.	Fibroma. Substance firm and elastic. On section seen to be of purely fibrous structure. No microscopic examination.	Failure of attempt at removal by ligature and evulsion, followed by an attempt to cut thro' the base of the polypus with a bistoury, resulting in death from hæmorrhage.	Death from hæmorrhage.
2. 1872.	Lichtenberg. Lancet, 1872, Vol. II, p. 773. Mackenzie: Dis. of Throat and Nose, Am. Ed., Vol. II, p. 375.	.....	...	.....	.....	Upper turbinated body and cribriform plate of ethmoid.	Fibroma. No microscopic examination.	.....	.....
3. 1877.	Morrell Mackenzie. Dis. of Throat and Nose, Am. Ed., Vol. II, p. 376.	Female.	35	2 years.	Pedunculated solid growth size of pigeon's egg, obstructing and projecting through the left choano into the naso-pharynx.	Roof of nasal fossa well within the nasal cavity.	Fibroma. On section, hard, dense and pale, microscopically, closely interlaced whitish fibres, with a few minute cells.	Evulsion with forceps through naso-pharynx.	No subsequent history given.
4. 1879.	Kempf. Louisville Med. News, 1879, VII, p. 65. Wagner: Dis. of Nose, 1884, p. 207.	Female.	50	1 year.	Left nostril entirely occluded. "Frog-face" appearance, left eye bulged forward; after removal size of goose egg, containing in its centre bones forming septum of nose.	.....	Fibroma.....	Unsuccessful attempt at removal by forceps; severe hæmorrhage. Finally, crucial incision over the left side of bridge of the nose, and bones lifted out. Tumor then pulled out by finger.	Recovery. No recurrence six months later.
5. 1882.	Buchanan. Glasgow Med. Journal, 1882, XVII, p. 211. Wagner; Diseases of Nose, 1884, p, 216.	Male.	21	2 mos.	A firm reddish elastic swelling, projecting down in front so as to appear outside the *ala nasi* and growing from the cartilaginous septum on each side. Exciting cause, a blow on the nose.	Septum nasi.....	Fibroma. Microscopically well defined fibrous tissue; here and there clump of round cells close to blood-vessels, probably inflammatory.	Column divided at its base and turned up; septum divided above and below, tumor grasped by vulsellum and twisted from posterior attachment.	Immediate union. No subsequent history.
6. 1883.	Jacquemart. Annales des Maladies de L'Oveille du Larynx, du Nez, etc., Mai, 1883, p. 69.	Male.	29	.....	Multilobular tumor on each side, nose flattened and dilated. Masses of firm consistence, protruding from each side, having an aspect more fibrous than mucous. Quite vascular and resistant.	Superior turbinated body and anterior part of superior meatus.	Fibro-myxoma, with greatly predominating fibrous structure. Also some smaller myxomatous growths. No microscopic examination.	Removed in 50 pieces by cold wire snare in 15 sittings. Previous attempts by forceps failed.	Recovery.....
7. 1884.	Jeanselme. Annales des Maladies de L'Oveille du Larynx, du Nez, etc., Nov., 1884.	.....	....	2 years.	Left nasal fossa, occasioning deformity of nose. Pedunculated.	Posterior part of septum.	Fibro-sarcoma (microscope). Included in this table because fibrous elements predominated, and because probably it originated as a fibroma.	Exposed and removed by a medium incision through the bridge of the nose.	.....
8. 1887.	Casselberry. Section in Laryngology, Ninth Int. Medical Congress, Washington, D. C.	Female.	39	5 years.	Left nasal fossa; slight projection from anterior aperture; commencing "frog-face;" total occlusion of nostril; naso-pharynx approximately normal. Estimated size, that of a pullet's egg.	Horizontal plate of ethmoid bone and anterior perpendicular surface of body of sphenoid bone (roof of nasal vault).	Fibroma. Microscopic examination. Composed entirely of irregularly arranged bundles of fibres.	Removed piecemeal by galvano-cautery écraseur, assisted by knife electrode, and its base cauterized by same means. Repeated sittings.	Recovery. Well at the end of 17 mos. Note.—Continues well without further recurr'nce at the end of 24 months.

each time to the bone. This also I did a small part at a time, fearing to produce much inflammatory action on account of the proximity to the cerebral meninges through the cribriform plate of the ethmoid bone. I cauterized everything which had any appearance of fibroma, preferring to touch that which was not fibroma rather than to leave untouched that which was. At the end of six months the tumor seemed thoroughly eradicated. The fossa above the inferior turbinated body was unoccupied by anything but rudiments of the middle and inferior turbinated bodies, the view of the vault in all directions being uninterrupted.

At the end of nine months a recurrent tumor the size of a small bean was discovered attached to the lateral wall, just above the anterior ends of the inferior turbinated body. Probably a point of secondary attachment here had escaped cauterization and redeveloped, for on account of the recession of the lateral wall it was at a point difficult of illumination and access, being just within the anterior aperture, but around the corner, as it were. This tumor was removed by the same means. At the end of seventeen months there is no appearance of any further recurrence, although in view of the known tendency to relapse in such cases she cannot even yet be considered wholly free from liability to redevelopment. I am indebted to Dr. Elbert Wing, Demonstrator of Pathology in the Chicago Medical College, and Pathologist to Cook County Hospital, for the microscopic examination of sections of the tumor which, confirmed also by my own examination, demonstrated it to be a fibroma.

Treatment.—Of the seven other cases appended, in No. 1 attempts at removal by ligature and forceps failed, and were followed by an attempt to cut through the base of the polypus with a bistoury, which resulted in death from hæmorrhage. The treatment in case No. 2 is not stated. In case No. 3 the tumor projected posteriorly and was removed by forceps introduced through the naso-pharynx. In three cases, Nos. 4, 5, and 7, external operations were performed to give access to the tumor: in No. 4 a crucial incision was made over the left side of the nose, and the nasal bones were lifted out; in No. 5 the nasal columna and septum were divided and the nose turned up; in No. 7 a median incision was made through the bridge of the nose. In case No. 6, possibly fibro-myxoma, the tumor was successfully removed, piecemeal, in fifteen sittings, by a cold wire snare. The advantages of the intra-nasal, galvano-cautery method, as detailed in my own case, are sufficiently obvious. General anæsthesia is unnecessary and the consequent shock and dread of operation are avoided. There is no external disfigurement, no dangerous hæmorrhage, and under cocaine, little or no pain. My patient would sit in the operating chair and have piece after piece removed without manifesting even discomfort. It is certainly a more brilliant operation, when possible, to encircle the entire tumor and remove it *in toto* at one sitting, but in case of the larger fibromata this will usually be impracticable on account of the impaction of the mass into the inequalities of the nasal fossa, and the formation of adhesions. Moreover, the slower method of removal, piece by piece, offers the advantage of greater deliberation, implying also as it does greater precision, for when sufficient oozing occurs to interfere with the view further action is postponed until the next time. By repeated sittings the patient becomes accustomed to manipulation and learns to assist the surgeon by holding correctly. The surgeon also in turn by repeated opportunities to study the parts becomes so familiar with the area over which he is working that he can readily trace out all the ramifications of the growth. No undue inflammatory reaction follows and sepsis can be avoided by thorough cleansing of the nostril by means of an antiseptic spray.

In the case of Mrs. R., to whom any facial disfigurement would have been exceedingly abhorrent, the galvano-cautery used in this manner was the one means which rendered a formidable external operation avoidable. The nature of the case would have precluded an effective intra-nasal use of the cold-wire snare, ligature, forceps, or chemical caustics.

An agent capable of effecting such brilliant results naturally engenders an enthusiasm which is liable to lead to its abuse and a word of caution is not unnecessary in this respect. Accurate diagnosis, precise indications for its use, and a certain amount of skill on the part of the operator are essentials to the judicious employment of the galvano-cautery. And it must not be supposed that *all* cases of nasal fibroma will be susceptible of this means of cure. Enormous size and penetration into accessory cavities may render it ineffective.

Electrolysis has been successfully employed by Lincoln in naso-pharyngeal fibroma and it might prove serviceable in nasal fibroma of enormous growth, at least to reduce the size to such a point that the galvano-cautery could cope with it, thus avoiding an external operation.

An analytical record of cases is given.

70 Monroe Street.

A CASE OF LARYNGEAL GROWTH.

Read before the Medical Society of the District of Columbia, December 14, 1887.

BY C. W. RICHARDSON, M.D.,
OF WASHINGTON, D. C.

Operations for the removal of laryngeal growth are of such common occurrence and the subject has been so thoroughly treated by laryngologists, that there would seem nothing new or interesting upon this subject to be added. The case I am about to report, while not individual, is one of uncommon nature and presents certain points of interest.

On November 4, 1886, Mr. W. E. S. was referred to me by Dr. Z. T. Sowers, with the following history: The patient had been unusually free from sickness of any character previous to the development of the present affection. His family history is excellent, no hereditary tendencies being found upon either paternal or maternal side. When about the age of 11 he began to sing as chorister boy, filling a soprano

part, in the church at his native home, near Sheffield, and continued to serve in that capacity until his 16th year, when he was obliged to desist on account of the period of mutation having set in. Later I shall try to show the influence of this singing upon the production of this growth. At about his 20th year, his voice had rounded into a deep bass, marred, however, with a very slight touch of hoarseness. Two years later this hoarseness had increased to such a degree that he was obliged to give up singing. This change in his voice became greater and a new symptom developed, which the patient described as a "catch in the voice." About this time our patient came to America.

Shortly after his arrival in America he noticed that he breathed with greater difficulty, especially at night, which continued to increase until the removal of the growth. Dysphagia was present to a slight extent.

Present Condition.—The first point that attracted my attention was the character of his voice, and his apparent difficulty of breathing. This voice was not one of marked hoarseness, as is usually found in cases of laryngeal growth, but rather resembling the hoarseness of laryngeal blennorrhea, produced by three factors, viz.: the excessive amount of mucus which adheres to the chords not only preventing their apposition but also producing secondary tones, paresis, and infiltration into and thickening of the substance of the chords. While the patient was conversing with this slight hoarseness there was a sudden arrest of the voice, while the lips moved and the patient made violent attempts to speak—resembling very much the efforts seen in a stutterer—the words remaining unpronounced. After a few ineffectual efforts, a toss of the head, followed by a deep inspiration—attended with a decided stridor—he regained his voice. He continued to converse in this slightly hoarse voice until again interrupted by another complete cessation of the voice. These attacks, if I may so call them, were at times—when the patient persisted in his efforts to speak—accompanied by marked dyspnœa. Dyspnœa was another symptom from which the patient has suffered considerably, and it was this one alarming symptom which caused him to seek medical advice. He had no special hunger for air while in repose, or taking moderate exercise, but should he exert himself, as in walking fast, ascending heights and steps, or bicycling, the want of air became very pronounced.

Dyspnœa was very marked at night, and not infrequently attended with severe asthmatic seizures. The patient states, "For the last six months I have not had a pleasant night's rest. I am constantly aroused from my sleep by feelings of suffocation and when asleep toss from one side of the bed to the other." These asthmatic paroxysms occurred almost always while the patient was on his back, and very frequently while his face was covered with the sheet —a habit of which he was guilty while asleep.

Objective Examination.—The tongue was normal, as well as the mucous membranes lining the surface of the buccal cavity. Tonsils, uvula and palatine arches presented no deviation from the normal condition. Pharynx congested, and presenting here and there small shreds of adherent mucus. Naso-pharynx quite roomy and showing slight glandular hypertrophy. On the first introduction of the laryngeal mirror, and the patient having been told to intone *a*, there was apparently nothing foreign discernible. The cords showed only a slight want of opposition, a fact readily explained by the large clumps of mucus interposed between and firmly adherent to their free edges. The whole of the larynx, epiglottis, ary-epiglottidean folds, false cords and arytenoids, presented quite a marked appearance of congestion. The vocal cords themselves were infiltrated, of a dirty, pinkish-yellow color, passing into a bright red at their free edges—covered here and there with small masses of adherent mucus. I told the patient to clear his voice, and introduced the mirror a second time—with no better result than before. I then caused the patient to make a deep inspiration, in order to get a good view of the sub-cordal portion of the larynx, but could discover nothing, except that this portion of the larynx was excessively congested.

The patient, being now quite restless, after allowing him to rest a few moments, I requested him to make a deep inspiration, to be followed by a forced expiration, at the end of which he was to intonate *a*, sharply. Just before he finished his expiration, I quickly introduced my mirror and beheld the following: a large, bright red body about the size of a cherry was imprisoned between the vocal cords, extending from the anterior commissure to the processus vocales, posteriorly and overlapping to some extent the vocal cords. This growth presented two lateral and one inferior lobe, the latter being imprisoned between the cords, the former spreading over the cords on each side, thus acting like a valve, and explaining the pronounced dyspnœa which occurred during the aphonic stages. It can be readily seen how, the patient persisting in his efforts to phonate— the cords contracting upon the inferior lobe, the lateral lobes spreading out over the surface of the cords—the growth interfered with respiration until the desire for air became so great as to cause him to relax his efforts, the growth being drawn into the sub-corded portion of the larynx in the manner already described. The patient being asked to inspire, which he accomplished after several efforts, the cords separated and the growth passed into the sub-cordal portion of the larynx. It is well to observe here that the cords, even during a deep inspiration, did not expand fully—the right cord, to which the growth was attached, never passing beyond the cadaveric position, the left cord making only a slightly greater excursion than its fellow. After several more examinations, I came to the conclusion that the tumor was attached to the under surface and inner edge of the right vocal cord within a line of the anterior commissure. After putting my patient through a thorough course of training, which the use of that valued agent, cocaine, does not render unnecessary, of four days' duration, and being satisfied that he would follow all directions, I decided to operate on the fifth day.

On Monday, November 8, in the presence of Dr.

Sowers, after thoroughly applying a 20 per cent. solution of cocaine to the larynx, I removed the growth with Schrœther's modification of Türck's pincette. On the first attempt at introduction of the instrument, and as I was passing back of the epiglottis, he made an effort at deglutition which compelled me to remove the instrument and the mirror. In a few moments I quieted him and again introduced my instrument, passing it well downward and forward to the anterior commissure to the point of attachment, and after firmly grasping the growth, evulsed it. Again examining the larynx, to see if all the growth had been evulsed, I found it so filled with blood as to obscure entirely the supposed site of attachment. On examining the patient the following day, I observed a small portion of the pedicle, about the size of a mustard seed, projecting from beneath the free edge of the right vocal cord. This was removed without difficulty and brought with it a small portion of mucous membrane. My patient had now nearly a clear voice. For several weeks thereafter, I made local applications of nitrate of silver for the purpose of relieving the co-existing laryngitis. After this course of treatment, I discharged my patient, completely relieved, with every function of the larynx normal, and he so remains at the present writing. I am sorry that I did not have a careful microscopical examination of the growth made—which I would have done had I intended reporting the case. From macroscopical appearances it bore all the characteristics of a fibroma.

There are several points of interest in this case, the most important of which, and the one to which I first call your attention, is that these forms of growth, especially when quite small, frequently lead to errors in diagnosis, even if one be an adept in laryngeal examinations. That they are not mere fancies, but that errors do occur may be illustrated by my own experience as well as that of others who have had vast experience in laryngological work. By citing a hypothetical case, which will not be overdrawn, I may better illustrate this point.

A patient comes with a history of slight hoarseness of some years duration, possibly slight dyspnœa, his patience exhausted by a long course of ineffectual treatment by the general practitioner, and, I might add, in a doubting frame of mind. The patient undergoes his first laryngeal examination which on account of his nervous condition is attended with a little difficulty. A hasty view is obtained and the larynx is seen to be in a state of chronic inflammation, the vocal cords are infiltrated, presenting here and there little shreds of mucus running from one cord to the other, possibly showing a little insufficiency. The sub-cordal portion is seen to be in a much congested condition, and the growth on account of its small size and situation, being of the same bright red color as the sub-cordal mucous membrane, and lying well hidden beneath the anterior commissure and the cord to which it is attached, fails of detection. Rapidly running over in mind the conditions which could give rise to such symptoms, we eliminate all except chronic laryngitis, with slight paresis, the evidences of which are present, and imparting this information to our patient—a little guardedly, probably—and with the advice to call on the morrow, dismiss him. The same information he has probably received before, hence he leaves never to return. A few days later a neighboring specialist narrates to you an interesting case of laryngeal growth, and in it you recognize your case of a few days ago. Chagrin and vexation would not have been yours, had you been a little more careful and thorough in your examination. As I have previously stated, such cases are not fanciful, for I have seen three such mistakes committed, and in one of the cases was the error committed by quite a distinguished laryngologist. Prof. Schrœther once made the remark while speaking of a case of this nature, that no laryngologist should allow such a patient, one presenting the symptoms enumerated above, to leave his consultation room with a diagnosis of chronic laryngitis only, without adopting all manœuvres necessary to explain such a condition, of which the forced expiration after a deep inspiration, with the rapidly following intonation of *a*, is important in proving the existence or non-existence of a growth attached to the under surface of the cords. Even in the present case, the growth being quite large, at the second examination after the greatest care and effort I could not bring the growth to view and almost doubted my having seen it on the previous day.

On the fourth day—the patient now submitting freely to laryngeal examination—one of my professional friends who is quite an adept in the use of the laryngeal mirror, called, and, after I explained to him the nature of the growth, he procceeded to examine the patient. After introducing his mirror several times I could see by the expression of his face that he was beginning to doubt my diagnosis. I subsequently proved to him the existence of the growth, with evident satisfaction, as the incredulous expression gradually gave way to one of credulity. It is useless for one to assert that he would not make such an error, for even with these facts fresh in his memory, he may on the morrow be guilty of committing such an error. It is only by constantly calling attention to the possible errors in diagnosis that we are able to avoid them.

1106 L Street, Washington.

ETIOLOGY OF TYPHOID FEVER, AS OBSERVED IN COUNTRY PRACTICE.

Read in the Section on Practical Medicine, Materia Medica, and Therapeutics, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY L. N. DAVIS, M.D.,

OF FARMLAND, IND.

Philosophically it would not seem true that the forces of nature which shaped the human body and gave to it its symmetry also filled the air and water with a formidable foe to mankind. Such an admission would seem inconsistent with the ideas of man, not a reproach to the laws of nature. But the "germ theory" of the origin of many diseases, at present, is dominant; and it would seem poor policy for a med-

ical men to oppose the specificity of typhoid poison. It would be equivalent to inviting the contumely and discredit of his profession.

Not many years since the only requisite of science to establish the cause of an outbreak of typhoid fever, consisted in developing a defective sewer-pipe, an illy kept cellar, or impure water supply. The specific element was by no means always a consideration in the elaboration of the poison. With so light a task before him, the attending physician seldom traversed much territory, literally or mentally, before the *hot-bed* of disease was discovered. If in the country, a hog-wallow or a pile of rotten potatoes would answer, in the absence of the above essentials. He must now, however, account in some manner for the presence of an organized poison or germ in the production of typhoid fever. The ingenuity of the country doctor is often sorely tried in such an inquiry, but his credulity many times leads him to the desired results. The wonderful and unique properties attributed to the disease germ makes almost any theory of its development or transportation probable, and allows credulity a wide range of application, but doubtless often, *a priori*, the views adopted are incorrect.

For the last 8 years typhoid fever has occupied the place formerly held by malarial fevers in our section (Randolph Co.). This change has been noted in many other instances, by great authorities; why it occurs they do not attempt to tell. Drainage has been steadily advancing in the district for the past 30 years, but does not yet approach perfection. Typhoid fever has prevailed sporadically, with no large number of cases in any given locality, and during the time specified I have known of almost every case within an area of ten miles square. To exemplify the impossibility of finding, in the country, the positive source of and medium through which the virus of typhoid fever enters the body of the patient, and as bearing facts upon the period of incubation, contagiousness and predisposing causes of the fever, I will give a brief history of the following outbreak:

On the 26th of September, 1886, I saw Miss Ida Ford, æt. 24 years, junior member of a family of four persons, including a farm hand. Miss Ford was born and raised on the farm and in the house she now occupies. She has not been off the premises to dine or stay over night for more than three months, nor has the family visited or entertained visitors within that time. The family uses water from a well about twenty feet in depth that has served them continuously for a period of 25 years. The well is situated on a slight eminence, so that the surface water inclines away from it in every direction, neither is it probable that there is any infiltration from the distant barnyard or meadows.

There has been no sickness in the Ford family for 10 years of any character, and never was a case of typhoid fever on the place since it has been settled by the whites. To my certain knowledge there has not been a case of typhoid fever nearer the residence than two and one-half miles for 15 years. No case even at this distance for more than 2 years.

The case was pronounced one of typhoid fever. It was attended with a high temperature and much nervousness, but no diarrhœa at any time, and terminated in recovery in 21 days.

The dejections from the bowels were of a solid character throughout the disease, were always disinfected with nitric acid, carried a distance from the house and buried in the earth. The clothes of the patient and the bed linen were changed every other day. Visitors had been rigidly excluded from the sick room during the continuance of the case. Her mother was her sole nurse, and she was scarcely absent from the bedside of the patient 20 minutes at one time during her sickness; many times, indeed, she occupied the bed with her daughter over night.

About 28 days after the attack of Miss Ford, her mother took the disease also. Mrs. Ford was 54 years of age and of delicate build; she had two severe hæmmorrhages from the bowels at the end of the second week; was sick one month and three days, when she died.

The nursing in this case was entrusted largely to the neighbor women by night and the husband during the day. Seven or eight persons were thus engaged, by turns, during the whole course of the case. Of this number Mrs. Bales, who lived about a mile distant, bore about an equal part of the burden.

On the 12th of December, or 28 to 35 days from the time she commenced to wait upon Mrs. Ford, Mrs. Bales fell sick. Of the seven or eight nurses above referred to, Mrs. Bales was much the most feeble of constitution. It has never been my fortune to wait upon a worse case of typhoid fever than followed. She had two hæmorrhages from the bowels, and passed much of the winter in a semi-conscious condition, but finally recovered.

The Bales family consists of eight members, but a farm hand and an assistant in the kitchen were employed during the sickness. The Bales' residence is a commodious two-story frame house which has only been built 3 years. The site is elevated and has never before been occupied by a building. The well was dug and the outbuildings constructed when the house was built. Prior to the sickness of Mrs. Bales there has been but one case in the family demanding the attention of a doctor since the house has been occupied—a case of summer diarrhœa in an infant of 3 months. The eldest daughter, who is a rugged girl of 20 years, had been employed in the Ford family about four weeks during the sickness of the latter. Later she became the principal attendant upon her mother. The five remaining children were excluded from the sick-room. I need scarcely add that the fecal discharges were cared for as in former cases, and the bed linen changed every forty-eight hours. The sleeping apartments of the children were upstairs, while the sick-room was on the first floor.

Notwithstanding the precautionary measures, precisely twenty four days after the mother took sick the five children, æt. from 8 to 18 years, began to manifest symptoms of the disease. The subsequent three weeks gave full development to all the phases of typical and grave typhoid fever in each of the five cases. All recovered. The oldest daughter, who had shared the danger, whatever it might be, in both families, escaped; also Mr. Bales and both hired assistants.

In the Ford family the husband, hired hand, two or three kitchen girls and all of the nurses but Mrs. Bales escaped, thus giving indubitable proof, which requires no argument, that the water could not have been the source of the poison.

Excluding the drinking-water, which is the vehicle of such baleful influence in so many well authenticated epidemics of typhoid fever, to what source must we look for the cause of our first case? Water is thought to be the channel through which the poison is conveyed to the patient, inasmuch as 95 per cent. of all the cases are thought to be thus caused.

The atmosphere is the only other means that is recognized as capable of conveying the poison, and it is potent only at a very short distance. If atmospheric infection be offered as a solution of the mystery, we meet with the same difficulty as with the water: we cannot account for the introduction of the poison, nor why so many who breathed the same air escaped the disease.

Therefore we are compelled, in this instance—as in many others—to ascribe to it autochthonous origin. The constitutional proclivity of our first case invited the attack; it was the only case originating from the first cause.

Mrs. Ford contracted the disease, directly or indirectly, from her daughter; she was the only close attendant and the only other member of the family who became infected. Whatever the nature of the virus, it seems to have been limited to the immediate vicinity of the patient's body, and to have been capable in twenty-eight days of producing an effect on the constitution of a previously healthy person. Mrs. Bales imbibed the poison in the Ford family. She carried it home. In twenty-eight days from the time it made an impression on her system, it was capable of striking down five of her children. The sitting-room occupied by the children communicated with the sickroom of their mother, and they received the poison through an infected atmosphere. The eldest daughter in the Bales family—the most rugged of the children—who went through the entire sickness in both families escaped; Mr. Bales and two hired assistants, besides visitors and transient help, escaped. At the Ford residence all save Mrs. Bales, who was of very feeble constitution, escaped; showing quite conclusively that the drinking-water, as before observed, of neither of the families contained the poison, otherwise the infection would have been more general. The conclusion which follows, therefore, is that the real nature of the materies morbi of typhoid fever is but little known; that if it is not autogenetic, its origin many times is involved in impenetrable obscurity; that the organism or chemical product is as likely to assume an active form in the healthy surroundings of an isolated farmhouse as amid the filth of a badly neglected village or city; that constitutional proclivity, feeble health, or bodily fatigue has much to do in determining an attack. It is more than probable, also, that the poison may remain latent in the system until evoked by physical exhaustion, despondency, or other conditions of vital depression. Twenty-four to twenty-eight days constitute sufficient time for the poison to escape from the body of the sick, ripen if imperfect, and produce a toxic effect on the system of a previously healthy person. The poison which perpetuates the disease is not contained in the stools alone, but may emanate directly or indirectly from the body of one sick with typhoid fever. Water is certainly not the medium which conveys the poison, even in a small majority of the cases, in the country. But we cheerfully admit that the country doctor is not trained in the kind of knowledge which makes his observation of the etiology of disease highly valuable. May we not also question the propriety of the present trend of the highly learned in the profession, in practically accepting as facts very much that is not susceptible of demonstration, relative to the causation of disease?

GRADUATED TENOTOMY IN THE TREATMENT OF INSUFFICIENCIES OF THE OCULAR MUSCLES. (STEVENS' OPERATION).

Read before the Philadelphia County Medical Society, March 14, 1888.

BY CHARLES HERMON THOMAS, M.D.,
OF PHILADELPHIA.

The study of disorders of the ocular muscles in relation to functional nervous diseases has received a strong forward impetus during the past year, chiefly due to the published results of the labors in this direction of George T. Stevens, of New York, whose work on "Functional Nervous Diseases," recently published,[1] has challenged special attention, even where it has not met with entire approval.

The subject occupies a standpoint on the line between the two important specialties of ophthalmology and neurology, it takes somewhat from both, and has already, by force of circumstances, become in a certain sense a specialty by itself. The operation and its application have, until recently, remained to a remarkable degree personal in the hands of Dr. Stevens, notwithstanding that for many years he has reported it before medical societies and in the medical journals.[2] All this, however, has been recently changed by the publication, within the last year, of his work above referred to, which has brought the method into such prominent notice as to compel recognition.

Other operators have now entered the field, among whom is Prof. A. L. Ranney, of New York City, who, as a neurological specialist, has reported[3] a series of cases of the gravest neuroses successfully treated by the Stevens' method. Beyond question a point has now been reached which shows the subject to be worthy of the most sincere investigation.

What I have to present to-night is, to a certain extent, in the nature of a preliminary report; as my

[1] D. Appleton & Co., N. Y., 1887.
[2] See articles by Dr. George T. Stevens, on "Chorea" (Medical Record, 1876), on "Anomalies of the Ocular Muscles," (Archives of Ophthalmology, June, 1877).
[3] "The Treatment of Functional Nervous Diseases by the Relief of Eye Strain," (New York Medical Journal, Jan. 7, 1888).

work is necessarily incomplete in some particulars, owing chiefly to the considerable length of time required for observation to arrive at a just estimate of the permanency of the results obtained—especially in the gravest and, therefore, most important cases. I shall attempt to add little that is new to the presentation of the case as made by Dr. Stevens himself, and I cannot hope, in the length of time allotted for its consideration, to make a statement commensurate with its importance, but I have thought it right to rehearse briefly its principal features and to give my own experience in connection therewith, together with a sketch of a few of my own cases; because I have become convinced of the importance of the subject, and also because it has not, heretofore, been brought before this Society—nor, so far as I can learn, before any other of the medical societies of Philadelphia.

It is now about ten years ago that the operation was first brought to my notice by patients who had been under Dr. Stevens's care. It seemed to me incredible that results such as they claimed were produced in their cases could have been derived from the cause assigned. Again, I questioned the practicability of performing the operation in the definitely graduated manner which was said to be practiced. Under these circumstances, and in the absence of better information, my position was for a long time one of earnest opposition to the practice in question. About three years ago, however, having under my care several cases of muscular asthenopia which I was unable to relieve, though I obtained the advice of several of the best known ophthalmologists, and being freshly reminded of the work of Dr. Stevens by a patient of unusual intelligence and reliability, who reported great relief obtained at his hands, I asked his assistance in the treatment of these cases. He kindly demonstrated to me, upon patients of his own, the practicability of the operation, and I became convinced of its great value. The results obtained were so satisfactory that since that time I have investigated the muscular as thoroughly as the refractive conditions in all cases coming under my care, and have as faithfully undertaken to correct them.

For the discovery of abnormality in any of the straight muscles, their physiological condition, both while at rest and in action, and in all states of the acommodation of the eye must be thoroughly understood. In order that binocular vision may result, the visual lines of both eyes must converge upon the same point, whatever may be the position and distance of the object. It is only under such circumstances that the rays of light are brought to a focus at corresponding points upon both retinæ. A slight deviation results in diplopia, constituting strabismus, a subject sufficiently well understood, and to which Stevens's researches do not directly apply. But while there may be perfect binocular vision, and not the slightest indication of strabismus, there may be, nevertheless, grave faults affecting the recti. It is these faults that Dr. Stevens has emphasized, and to these his observations have been chiefly confined.

In the normal condition of the ocular muscles the visual lines of both eyes naturally preserve an almost exactly parallel direction when looking at distant objects; and they maintain such a position of their own accord from muscular tonicity alone, without the necessity of any additional stimulus. This can be shown by prismatic tests. The artificial diplopia produced in making the test will be such that the two images will lie in that plane which is at right angles to the base of the prism.[4] If, for example, diplopia be induced by a prism placed before either eye with its base directed either outward or inward, the two images will lie in the same *horizontal* plane; and similarly, *vertical* prisms, with base up or down, will induce diplopia; but in this case the two images will be situated in the same *vertical* plane. The reason for this is because the normal visual lines of both eyes naturally lie in the same *horizontal* and *vertical* planes, even when the powerful stimulus which the need of binocular vision presents is abolished by the prism. Hence, if the eyes in the normal state be directed to a distant object, binocular vision will occur without the need of extra muscular action to bring the visual lines to properly bear upon the object. If, on the other hand, the visual lines of the two eyes do not naturally take the proper position, one of two things will result, either there will be no effort to bring them into correspondence, and strabismus with attending diplopia occurs, or, *more frequently*, by an extra nervo-muscular effort, called into action by the demand for binocular vision, the proper position will be maintained; just as in facultative hypermetropia accommodation is necessary, even when parallel rays coming from a distant object are to be brought to a focus upon the retina. From this forced, though it may be involuntary or even unconscious effort to maintain the proper direction of the visual lines, the abnormal conditions under consideration result. We have abundant clinical evidence of the enormous expenditure of nerve force under these circumstances, and of the development of marked reflex disturbances, which are manifested both in symptoms of irritation and of exhaustion.

Dr. Stevens has[5] introduced a series of terms descriptive of the various abnormalities to which the recti muscles are subject. The word *exophoria* designates simply an outward tendency of the visual lines, without implying anything as to which muscle or set of muscles is at fault. The opposite condition, namely, tendency to convergence, is designated by the word *esophoria*, meaning an inward tending. If either visual line deviates above its fellow, the fact is expressed by the term *hyperphoria*, right or left as the case may be, always remembering that the lower image represents the higher-tending visual line. It is to be remarked that the condition of hyperphoria is far more frequently productive of

[4] Not that Dr. Stevens was by any means the first to employ prisms for the discovery of muscular irregularities, but he appears to have used them with greater precision and by more systematic methods than have heretofore prevailed.

[5] "A System of Terms relating to the Conditions of the Ocular Muscles known as 'Insufficiencies,'" by George T. Stevens, M.D., Ph.D., (New York Medical Journal, Dec. 4, 1886).

serious reflex disturbances than any other fault, and mainly for the reason that a small amount of deficiency in this direction may, and usually does, involve a considerable proportion of the total coordinating power of the vertical muscles; and this because the power of surcumduction is usually limited to about three degrees, while that of abduction is about eight edgrees, and that of adduction may be fifty degrees and upward. The generic term to express any deviation whatever from *orthophoria*, the normal, is *heterophoria*. Finally, the amount of heterophoria found in any given case is equivalent to and expressed by the degree of the prism required to correct the fault.

In practice, the tests for insufficiency are made by placing prisms before the eyes with their bases in certain definite directions. Lateral diplopia is produced by a prism with base in, vertical diplopia by a prism either up or down. If in lateral diplopia so induced, either image is above the plane of its fellow, we know that the higher image belongs to the eye whose visual line is lowest, to be expressed as hyperphoria of the opposite eye. If, in induced vertical diplopia, either image deviates from the vertical, we have lateral fault—esophoria if the diplopia be homonymous, exophoria if crossed.

In applying the prism test for the discovery of muscular anomalies it is not sufficient to be content with the results of a single or even several examinations, because we must always bear in mind the possibility of latency—that is to say, like latent hyperopia, the true fault may be concealed or masked. Indeed, as in latent hypermetropia we sometimes have apparent myopia through spasm of the muscle of accommodation, so in actual esophoria an apparent exophoria may be manifest, the result of spasm of the externi, and this is equally true of the other muscles. It is only by a careful consideration of all the circumstances, such as the degrees of abductive and adductive power; and, finally, by the use of temporary correcting prisms for whatever fault may be manifested, and following it up—but not leading it—as it develops, by a new correcting prism until the fault becomes stationary, that we are justified in proceeding to operation. In one obstinate case of exophoria I have several times obtained relaxation of spasm of the interni by a moderate dose of morphia administered hypodermically. But, though the after-results proved the observation under morphia to be expressive of the true condition in this case, there are obvious objections to the use of the drug as a matter of ordinary practice. The discovery of an efficient and safe agent for the relaxation of spasm of the recti muscles is greatly to be desired.

It sometimes happens that muscular anomalies of considerable degree are discovered in connection with refractive faults. By correcting the refractive error first not infrequently the muscular difficulty soon disappears, showing the muscular to have been dependent upon the refractive state. The correction of refractive errors, especially those of a hypermetropic character should always be made before applying the prismatic tests.

Defects of refraction and accommodation are well known as the source of serious reflexes, especially headaches or severe migraine, nausea and dizziness; but it is not so well known that defects of muscular adjustment through faults of the guiding muscles of the eye produce all these and many more serious results besides. From Dr. Stevens I quote:[6]

"Respecting the importance to be attributed to ocular, refractive, and muscular anomalies, I fear that my views will for some time to come continue to be regarded as something more than radical; but I am ready to reaffirm the proposition made years ago, that, among the various elements constituting the neuropathic tendency, these anomalies must be regarded as occupying a preëminent position.

"Summing up the experience in this field of work, it is shown that, not in occasional and rare instances only, but in a large proportion of cases of the most redoubtable neuroses, unusual and most salutary results may be anticipated from attention directed to visual troubles."

Among the neuroses shown in many cases to be dependent upon such troubles, are to be mentioned neuralgia, spinal irritation and neurasthenia, chorea, epilepsy, and mental disorders. Dr. Stevens further says:

"Not only are those painful or irregular conditions usually described as neuroses in great proportion responsive to the relief from ocular tensions, but a great variety of conditions commonly regarded as local affections yield as readily, and prove that with some possible local complications they are, in fact, reflex phenomena. As an instance of this class of trouble, I may mention the fact that in more than a score of cases of extreme dysmenorrhœa—in each of which the periodical suffering has been of intense character, of regular occurrence, and of the full duration of the menstrual life of the patient—the dysmenorrhœa has failed to occur after relief to the tension of a superior or inferior rectus."

So far as my experience goes, epilepsy very rarely results from simple conditions. The ocular anomalies in epilepsy are of the most complicated, and often of the most obscure character. A simple insufficiency may induce headache or other minor manifestations, but the ocular causes of epilepsy are usually of a character most perplexing to the surgeon, and sometimes of a character which cannot be completely remedied. Hence, great patience, and, in certain cases, much time and skill are required to accomplish that which can finally be done.

If, in the meantime, the patient and his friends are constantly assured by both lay and professional advisers that his efforts must, of necessity, prove fruitless, he is apt to withdraw from treatment, even while defects which are of great importance, are known to exist, and which, by continued efforts, might be removed."

Professor Ranney is authority for the statement that in cases of epilepsy of long duration under treatment directed to ocular difficulties, the affection

[6] See "Ocular Irritations and Nervous Disorders," by Dr. George F. Stevens, (N. Y. Medical Journal, April 16, 1887).

has been scarcely less tractable than diseases commonly regarded as easily curable.

As furnishing a suggestion as to the possible method of production of epileptic attacks from eye-strain, it is interesting to note some experiments performed several years ago by Drs. Dercum, Parker, and others in the artificial induction of convulsive seizures. They found that it was possible to produce spasms in many persons by the following method:[7]

"The subject being seated, the tips of the fingers of one or both hands were so placed upon the surface of a table as to give merely a delicate sense of contact—*i.e.*, the fingers were not allowed to rest upon the table, but were maintained, by a constant muscular effort, barely in contact with it. Any other position involving a like effort of constant muscular adjustment was found to be equally efficient. Any one object in the room was now selected, and the mind fixed upon it, or some subject of thought was taken up and unswervingly followed.

"After the lapse of a variable period of time, extending from a few minutes to an hour, and depending upon individual peculiarities to be noted, ... the subject was frequently thrown violently to the ground in a general convulsion, preceded by tremors which rapidly became more violent.

"Seizures equalling in violence a general convulsion were by no means induced in all subjects, and were generally the result of experiments repeated many times during the same evening. In the experimentors the convulsions became so easily induced that it was thought advisable to desist for a long period."

The *effort of constant muscular adjustment* here spoken of appears not unlike the condition found in the eyes in cases of insufficiency of the ocular muscles; and it seems not unreasonable to infer that if such strain of the muscles of the forearm would produce results of the kind reported by the authors just named, that the strain upon ill-balanced ocular muscles (which must be continuous during the whole of the time that the eyes are opened) should be productive of even more serious, and, indeed, permanent results.

In the majority of these cases there is but one satisfactory method of treatment, and that is graduated tenotomy. The operation consists in making a small opening through the conjunctiva, exactly over the insertion of the tendon, when the tendon is seized by extremely fine forceps and divided outwardly in each direction, preserving the extreme outer fibres, or at least the reflection of the capsule of Tenon, which serves as an auxiliary attachment. Tenotomies for strabismus and so-called partial tenotomies have, of course, long been made, but there are radical differences between these and the operation here described.

The fan-shaped expansion of the tendons of the recti at their points of insertion into the sclerotic are somewhat wider than is generally supposed, while the elasticity of their edges is an influential factor in determining a favorable result in the purpose of the operation—that is, in bringing about a relaxation which shall be permanent by permitting the divided portion to retract and form a new attachment to the globe further back.

The use of prisms as a means of treatment of marked heteropheria is not to be relied on; as in many cases they are found to be insufficient and disappointing.[8] They have, however, a certain value as means of systematic exercise of the ocular muscles, particularly in the milder cases.

When the correction is made by tenotomy, all that is necessary to be done in a given case should be regarded, in a sense, as one operation, though it may be in several stages and at different periods—as a watchmaker counts the regulating of the watch one operation, though he may be obliged to move the regulator a number of times; or as the correction of an astigmatism is one operation, though it may involve a number of sittings.

In one complicated case I have operated as many as seven times; the first operation nearly two years, and the last a week ago; the net result being an unquestionable gain both in head symptoms, which were at one time alarming, and in the severe asthenopia to which the patient had long been subject. Previous to the operation she had suffered from severe pain in the region of the eyes and in the back of the head, accompanied by general nervous distress of an entirely disabling character. An eminent ophthalmologist declared her to have organic disease at the base of the brain from the appearance of the eye ground. This was about three years ago. To-day this lady assured me that she felt "wonderfully better," and expressed her entire satisfaction with the treatment she had received.

It is to be reëmphasized in this connection, as an additional caution, that no operation is ever to be undertaken unless the indications for it are positively made out. From a perfectly plain case, evident to the merest tyro, to one demanding the greatest skill and patience of the most experienced, there is every gradation. Nothing would tend more to bring discredit upon the procedure than premature operations, which might result in such disturbance of the ocular muscles as seriously to cripple binocular vision without in the least alleviating the reflex condition for which the operation was undertaken.

Mrs. G. H. C., referred to me by Dr. W. H. H. Githens, æt. 32, married, mother of four children, has suffered for many years from almost constant severe headache combined with a feeling of drowsiness, the seat of the pain being the brow and vertex. Eyeballs painful, always felt better when the eyes were closed. There is frequently double vision, but no manifest strabismus. General condition markedly neurasthenic. Although there was no error of refraction except a very slight amount of hyperopia,

[7] See "Artificial Induction of Convulsive Seizures," by Drs. F. X. Dercum and A. J. Parker, (Journal of Mental and Nervous Diseases, October, 1884).

[8] Since this paper was written a physician of this city—himself an accomplished neurologist—who habitually wears spectacles for the correction of refractive errors, and who also suffers from muscular faults, in a conversation with me said with emphasis: "It is *impossible* for me to wear prisms. I have tried them thoroughly and know they would drive me crazy."

shown only under full mydriasis, the patient was unable to use her eyes at any near work, such as reading, sewing, etc., and at all times suffers from extreme intolerance of light. Ophthalmoscopic examination negative.

Muscular tests: The first examination showed an esophoria of 9°, which, under the use of partially correcting prisms worn for ten days, developed into settled fault of 20° of esophoria and 28° esophoria in accommodation.

Tenotomy of the left internus relieved all the muscular fault except 1°, which I have allowed to remain. The relief of all symptoms was immediate and complete. The headache, the pain in the eyes, the intolerance of light, the drowsiness and double vision have all vanished. She is now able (without the aid of glasses) to read and sew as well as anyone, and threading a needle, which previous to the operation was almost an impossibility for her, is now done with facility. The general health and spirits have improved to a remarkable extent. Perhaps no change in her condition is more marked than of her tone of voice, which from being high-pitched, nervous, almost wailing in character, has been moderated, mellowed, and vastly improved.

As additional illustration of what may be accomplished, I may mention the following case of Dr. Stevens:

J. H. W., thoroughly healthy boy, without any nervous symptoms whatever, has been under my oversight since infancy. Except for a chronic tarsal ophthalmia there was nothing to call attention to the eyes. Very slight hypermetropia, for which I had prescribed glasses several years ago. On examination three months ago there were 11° of esophoria manifest, for which an operation was performed, removing 7° of the fault. Two weeks later 4° additional were manifested; a week later the total manifest esophoria was 9°, when a second operation was performed, which resulted in the removal of 8° of the 9 then existing. A recent examination shows a manifest esophoria of 3°, being a let-out of 2° since the last operation.

From the first operation a marked change took place in his facial expression; his eyes, which had previously been almost closed, opened widely, the tarsal ophthalmia showed prompt improvement, and he expressed himself free from a constant struggle to keep the eyes from closing, which he had not noticed as dependent upon any condition of his eyes until after it had been relieved.

I present the patient this evening for the purpose of demonstrating the amount of set-back given to the tendon, which, though invisible under ordinary circumstances, may be readily seen, upon causing either eye to be rolled outward, as a vertical line in each eye, about 2 millimetres wide in one and a little less in the other, where the sclerotic is plainly visible through the conjunctiva.

Whether the claim made that the neuropathic predisposition is more frequently due to eye-strain than to other conditions is fully justified by the facts or not, it is unnecessary at present to determine, seeing that enough is known to make it certain that eye-strain from muscular fault is the cause of grave and varied reflex neuroses, and that in these cases carefully graduated tenotomy promises relief; besides, there is in such cases often sufficient justification for the sake of the eyes and sight—apart from the nervous condition—for the correction of the fault.

My own experience covers many of these operations, performed for the relief of a variety of conditions and, notwithstanding serious difficulties at times encountered, I have a steadily increasing confidence in the legitimacy and value of the method.

SENILE HYDROCEPHALUS.

Read before the District of Columbia Medical Society, December 7, 1887.

BY D. S. LAMB, M.D.,
OF WASHINGTON, D. C.

I show this specimen to illustrate the atrophy of the brain that sometimes takes place in old age, as well as the compensatory dilatation of the ventricles that takes place at the same time, made necessary by the fact that the brain is in a hard case. The woman was old, said to be 82 years, and had been somewhat demented for an indefinite time, explained doubtless by the progressive atrophy. November 24 she was seized with left hemiplegia and died six days afterwards, the 30th. The post-mortem examination illustrated well the abundance of pathological material which is sometimes found in an old person. The brain was atrophied and its ventricles dilated; the ventricular fluid, as well as the subdural and subarachnoidal, was increased in quantity, but transparent and clear as water. There was some congestion of the dura mater. The arteries were markedly atheromatous, and there were clots in several of them. The spinal cord, as low down as it could be examined from the brain cavity, was atrophied. The thyroid cartilage was brittle, with chalky deposit, and broke with ordinary handling. There was a muco. purulent accumulation in the pharynx and larynx. The lungs showed small chalky and pigmented nodules in upper lobes; probably from the cure of incipient tuberculosis. The lower lobe of the right lung showed sufficient recent pleurisy and pneumonia to prove in a weak person a sufficient cause of death.

The heart and pericardium were everywhere closely attached to each other by old adhesions. The substance of the heart itself was fatty; the aortic and mitral valves, as well as the aorta, were atheromatous. There were old adhesions of the liver to the diaphragm. The liver itself was small, atrophied, but the gall bladder was as much distended with bile as I ever saw it, projecting several inches forwards from the anterior border of the liver; apparently she had had no use for bile for some days, and it had greatly accumulated. The spleen was much atrophied; the intestines were not opened. The kidneys both showed contraction and small cysts, as well as some adhesion of capsule, suggesting chronic nephritis. The uterus was atrophied, but contained at the fun-

dus and projecting into the cavity a polypus the size and shape of an almond; the uterine mucous membrane was covered with dark blood, so that we might say that the polypus was *still active*. The ovaries were atrophied; the Fallopian tubes dilated.

MEDICAL PROGRESS.

STATISTICS OF SURGICAL TUBERCULOSIS.—SCHMALFUSS bearing in mind Volkmann's remark that tuberculosis in children and adults varies in regard to its curability and danger to life with the localization of the tuberculous foci in the different organs, regions of the body and tissues, has collated the operations for the past 10 years in Maas's clinic in Würzburg. The list does not include the polyclinic cases.

During the last ten years from which the statistics are taken Maas treated 1287 cases of tuberculosis, or 14.5 per cent. of the whole number of patients; 748 were males and 539 females; 58 had multiple tuberculosis.

I. *Tuberculosis of Bones and Joints.*—978 cases.

1. *Knee-joint*, 227 cases=18 per cent. of the whole number, and 23 per cent. of cases of bone tuberculosis. 33 per cent. in children under 16 years of age. Cured and improved 69 per cent.; died 14 per cent., of which 5 per cent. were children. Resection was performed in 27 cases, amputation in 49, 6 of these after previous resection.

2. *Ankle joint* and *foot-bones* 187 cases=14.5 per cent. of all cases of tuberculosis, and 19 per cent. of cases of bone tuberculosis. Of children under 16 years old there were 38 per cent. Cured and improved 79 per cent.; died 5 per cent. Resection in 46 cases, amputation in 16, 6 of which were after previous resection.

3. *Hip-joint* 160 cases=12 per cent. of all tuberculous cases, and 16 per cent. of cases of bone-tuberculosis; under 16 years old 68 per cent.; Cured and improved 60 per cent.; died 19.4 per cent. Of the cases in children 24 were resected; in 1 exarticulation was performed.

4. *Elbow-joint* 86 cases=7 per cent. of all tuberculous cases, and 9 per cent. of cases of bone-tuberculosis; children under 16 years 36 per cent. Cured and improved 62 per cent.; died 11 per cent. In 8 cases the arm was amputated, and resection done in 28 cases.

5. *Bones of the hand* 76 cases=6 per cent. of cases, and 8 per cent. of cases of bone-tuberculosis; 26 per cent. in childhood, the cases of spina ventosa being eliminated. Cured and improved 68 per cent.; died 11 per cent. Resection was done in 11 cases, and amputation in 10.

6. *Vertebral column* 74 cases=5.7 per cent. of all cases, and 7.5 per cent. of cases of bone-tuberculosis; 43 per cent. in childhood. Cured and improved 58 per cent.; died 17.6 per cent.

7. *Tibia* 44 cases=3 per cent. of cases, and 4 per cent. of cases of bone-tuberculosis; 43 per cent. in childhood. Cured and improved 79.5 per cent.; died 4.5 per cent.

8. *Skull* and *bones of face* 40 cases=3 per cent. of cases, and 4 per cent. of cases of bone-tuberculosis; 37.5 per cent. in childhood. Cured and improved 80 per cent.; died 5 per cent.

9. *Pelvic bones and sacrum* 35 cases=2.7 per cent. of all cases, and 3.6 per cent. of bone-tuberculosis; 11 per cent. in children. Cured and improved 23 per cent.; died 46 per cent.

10. *Sternum and ribs* 35 cases=2.7 per cent. of all cases, and 3.6 per cent. of cases of bone-tuberculosis; 12.5 per cent. in children. Cured and improved 63 per cent.; died 11 per cent.

There was no case of caries of the clavicle.

11. *Femur* 19 cases=1.6 per cent. of all cases, and 1.9 of cases of bone-tuberculosis; 37 per cent. of the cases in children. Cured and improved 74 per cent.; died 5 per cent. Amputation in one case.

12. *Shoulder-joint* 15 cases=1 per cent. of all cases, and 1.5 per cent. of tuberculosis of bone; 22 per cent. of cases in children. Cured and improved 87 per cent.

13. *Ulna* 14 cases=1 per cent. of all tuberculous cases, and 1.4 per cent. of cases of bone-tuberculosis; 29 per cent. of the cases in children. Cured and improved 100 per cent

14. *Humerus* 12 cases=almost 1 per cent. of all and of the cases of bone-tuberculosis; 17 per cent. in children. All cured.

15. *Radius* 7 cases=0.5 per cent. of all cases, and 0.7 per cent. of cases of bone tuberculosis; 1 per cent. in children. Cured and improved 86 per cent.; died 14 per cent.

16. *Fibula* 5 cases=0.4 per cent. of all, and 0.5 per cent. of cases of bone-tuberculosis; all in adults. Cured and improved 60 per cent.

17. *Patella* 1 case=0.08 per cent. of all cases, and 0.1 per cent. of cases of bone-tuberculosis. Cured.

II. *Tuberculosis of lymph glands.*—In all 196 cases =15 per cent. of all cases of tuberculosis; 31 per cent. in children. Cured and improved 79.5 per cent.; died 4 per cent.

III. *Tuberculosis of the skin and cellular tissue.*—In all 77 cases=6 per cent. of all cases; 34 per cent. in children. Cured and improved 74 per cent.; died 3 per cent. Contrary to Volkmann's experience, in the clinic at Würzburg tuberculosis of the skin was more frequent in adults than in children.

IV. *Tuberculosis of accessible mucous membranes.* In all 10 cases=0.8 per cent. of all cases; only 1 in childhood. Cured and improved 70 per cent.; died 20 per cent. There were two cases of tuberculosis of the tongue, 4 of tuberculous fistula ani, 1 tuberculous bursitis, 1 of tuberculous enteritis, and 1 of tuberculosis of the pharynx.

V. *Urogenital apparatus.*—In all 20 cases in males; 25 per cent. of these in boys. Cured and improved 65 per cent.; died 10 per cent. There were 18 cases of tuberculosis of the testicle, and 2 of tuberculosis of the kidney. Of the 18 with tuberculosis of the testicle 12 were castrated, 2 on both sides; of these 5 were children. The outcome of these cases is directly contrary to Volkmann's dictum that castration is of no use in children.—*Centralbl. für Chirurgie*, No. 8, 1888.

INTRALARYNGEAL AND INTRATRACHEAL THYROIDEAL TUMORS.—DR. A. HEISE reports 3 cases of new growths composed of strumous thyroid glandular tissue, occurring within the interior of the larynx and trachea, in the Tübingen clinic since 1874. Ziemssen was perhaps the first to describe these tumors. He records, in 1875, a case occurring in a shoemaker 30 years old. This tumor was situated so as to compress the posterior wall of the trachea. The origin or histogenesis of these tumors is an interesting study. In the cases recorded in the Tübingen clinic the tumors were isolated from the thyroid gland, they caused no ulcer of the trachea; the mucous membrane was intact over their surface; they protruded into the lumen of the larynx or trachea, causing dyspnœa. The thyroid proper was little or not at all enlarged. These cases are, from a clinical standpoint, intralaryngeal or intratracheal struma. But it is to be also remarked that these growths cannot be classed among the malignant or benign growths of the thyroid projecting or compressing the larynx or trachea. They are rather accessory thyroid glands developing from an anomalous disposition of some embryonal thyroid tissue in fœtal life. The tumor was situated, in the 3 cases of Bruns, on the posterior wall of the larynx and trachea. This situation is avoided by most other tumors of the larynx, as the papillomata. The tumors are not connected in any way with the cords.

In all four recorded cases the tumors were subglottic. In the cases of Bruns the tumors extended from the glottis to the extent of two to four tracheal rings. In Ziemssen's case the tumor began in the middle of the cricoid cartilage, extending downward for 2 cm. The above situation is a constant one. The surface of the tumors is smooth. In one case of Bruns the thyroid gland, though little enlarged, showed slight strumous changes. The tumors had a characteristic cylindrical form, with broad base. The dyspnœa was a gradually increasing one. The differential diagnosis concerns only benign growths situated below the glottis. There are infrequently papillomata or fibromata. The former are cauliflower in appearance and often multiple; the latter are small and sessile.

Adenomata have only been observed twice, and in both cases multiple. Enchondromata are somewhat more frequent. In all of the cases of Bruns the tumors were removed by extra-laryngeal interference (tracheotomy). The intralaryngeal methods are useless here. The dangers are hæmorrhage into the trachea. This may be obviated by the Trendelenburg tamponade. In incomplete narcosis the manipulation of the mucous membrane causes a disagreeable tendency to cough; this may be obviated by painting the surface of the trachea with a 2 per cent. solution of cocaine. The galvano-caustic apparatus was used in two cases, the scissors in one. In all cases the recovery was most satisfactory and complete.—*Beiträge zur klin. Chir. von P. Bruns, Tübingen*, 1887. *Annals of Surgery*, April, 1888.

SULPHUROUS INHALATIONS FOR PHTHISIS.—A series of observations has recently been made on a method of treating pulmonary tuberculosis, which, if not curative, would appear to possess a beneficial power over the progress of this dread malady. The method consists in the systematic inhalation of an atmosphere impregnated with the fumes of sulphurous anhydride (SO_2); and several ingenious plans of obtaining a constant supply of the gas have been devised, the best of which is a lamp constructed to burn bisulphide of carbon. The simple plan of burning flowers of sulphur in a closed room can, however, be resorted to if desired. Under its influence, it is said, the expectoration becomes more liquid, the mucous surfaces are relieved from the irritation caused by the presence of muco-purulent secretions, and the patient is spared the fatigue of violent paroxysms of cough. In a certain number of favorable cases the improvement in the general health which follows is reported to be sufficient to allow of the cicatrization of cavities, and the subsidence of the more disquieting symptoms. The irritating effects of the vapor may be mitigated to some extent by burning opium and gum benzoin at the same time. Some two hundred observations have already been recorded, and the results have been sufficiently good to warrant a more general trial. Caution is advisable in the quantity of the gas, which should not exceed a certain proportion, which must be ascertained by close supervision of the patient during its administration.—*British Medical Journal*, March 17, 1888.

WHEN SHOULD ANTIPYRIN BE GIVEN.—Antipyrin should be administered with or immediately after a meal, otherwise pain, nausea, and discomfort may result from its contact with the walls of the stomach. The cutaneous manifestations which sometimes follow its ingestion are probably due to vaso-motor disturbances characterized by peripheral dilatation of the arterioles. In certain cases the rash has simulated that of scarlatina, with intense itching. There is every reason to suspect that in consequence of the present great demand for the drug, due care may not be employed in its manufacture, and it is suggested that an analysis should be ordered whenever toxic symptoms are observed. Dujardin-Beaumetz claims to have detected a mixture of benzine in certain samples, the presence of which would explain many untoward effects. It should be borne in mind, especially by the public, that we have in antipyrin a useful but potent agent, the use of which in unskilled hands may and will in a certain proportion of cases give rise to severe and even fatal symptoms. Manufacturers would also do well to look a little more closely to the purity of the drug, otherwise it may fall into discredit.—*Medical Press*, March 14, 1888.

WEIL'S DISEASE.—A few years ago PROF. WEIL described a new infectious disease characterized by fever, headache, gastric disorder, jaundice, and pains in the muscles. In the *Deutsches Archiv für klin. Medicin* there have been four or five articles on the subject during the past five years, and in the current number Fiedler, of Dresden, records thirteen cases, and discusses fully the general characters and diag-

nosis of the disease. The onset of the affection is sudden, without prodromata, and often with a chill. The characteristic symptoms are those above mentioned. The fever runs a typical course, and lasts from eight to ten days. The liver and spleen are usually swollen, and the former is tender. Nephritis often occurs, and herpes and erythema have been present. The cases so far have been chiefly in men, and nine of Fiedler's patients were butchers. The prognosis is favorable. The cause of the disease is unknown, but the fact that dealers in meats form such a large proportion of the cases suggests the direction in which the poison is to be sought. Fiedler discusses the diagnosis, particularly from abortive typhoid, and concludes that it is an affection *sui generis*. It is quite possible that the affection may prove to be a form of chronic ptomaine poisoning.—*Medical News*, April 7, 1888.

CONTRAINDICATIONS AND DANGERS OF ANTIPYRIN.—ELOY calls attention to the unpleasant and sometimes dangerous effects of antipyrin, which he has collated from existing literature.

Nausea, vomiting, and gastro-intestinal disorders may result from the use of the drug. Syncope has occurred, and Bentzeff believes that the drug always causes this tendency. The opinions of Moncorvo and Dujardin-Beaumetz are quoted to show that the drug modifies the secretion of urine, and it is said that it closes or shuts up the kidneys. Barr has recently recorded a case of collapse and death following the administration of from gr. 15 to 30 in two doses. In one case of puerperal fever the drug caused a fall of more than 2.5° C., with vomiting and diarrhœa. Rigors then came on, the extremities became livid, and the patient died in syncope in 32 hours. An autopsy showed the spleen contracted, the kidneys shrunken and containing infarcts. [It appears, however, that Eloy has not made out his case against antipyrin. In the case of puerperal fever there is no evidence against the drug from the report of the autopsy. It is not fair to attribute every and any unfavorable turn in a case to the use of the drug last administered.]—*Revue Gén. de Clin. et de Thérap.*, March 1, 1888.

TECHNIQUE OF ERGOTININ INJECTIONS.—A. SCHÜCKING repeats his claim that injections of pure ergotinin into the posterior or anterior lip of the uterus, is harmless, painless, and the best method of administering ergotinin. The needle should be pushed about .2 to .4 inch into the tissue, and remain in place a few seconds. In erosions and hyperplasias of the glands of the portio vaginalis the injection of iodine or Fowler's solution has given him good results.—*Centralbl für Gynäk.*, No. 8, 1888.

URETHRAL IRRIGATION IN GONORRHŒA.—PETERSEN thinks that the use of the syringe is the weakest point in the treatment of gonorrhœa, because the opening is so small that a moderate sized stream only can be used, coming in contact only with a part of the mucous membrane of the urethra, and because the amount of pressure used is left to the patient. Petersen uses a urethral irrigator, and thinks it much better than the ordinary syringe.—*St. Petersburg med. Wochenschrift*, No. 37, 1887.

HYSTERICAL NEUROSIS IN A CHILD.—HELLMUTH reports the case of a girl, æt. 14, never menstruated, who had hallucinations of a religious character. There was extreme cutaneous anæsthesia. Under the use of chloral, paraldehyde, and dialysed iron and the following mixture the patient was cured in a few weeks.

Podophyllin	gram.
Ext. belladonna	ää 0.50
Ext. aloes-aqueous	1.50
Ext. tarax. q. s. sat.	

℞

25 pills. 2 pills morning and night.

—*Internat. klin. Rundschau*, No. 41, 1887.

DRAINAGE OF THE PERITONEAL CAVITY.—In the Société de Chirurgie, on March 7, M. TERRIER reported seven successful cases of laparotomy in which drainage of the peritoneal cavity was used, without previous washing out of the cavity. MM. Bouilly and Terrillon, while they have no fear of drainage, think washing out better. *L'Union Médicale*, No. 33, 1888.

MR. ST. CLAIR BUXTON finds the following formula uniformly successful in curing tobacco amblyopia:

Liq. hydrarg. perchloridi (B. P.)	ʒss.
Potassii iodidi	gr. xij.
Aquæ destil.	ʒj.

To the above he adds for simultaneous administration the following pill:

Ext. nucis vomic	gr. ss.
Ext. hyoscyami	gr. j.

Ft. pil. no. i. The pill of this strength is given three times a day, and with the solution.—*Lancet*, Feb. 25, 1888.

METHYLAL SUBCUTANEOUSLY IN DELIRIUM TREMENS.—KRAFFT-EBING, after using methylal subcutaneously in twenty-one cases of delirium tremens, finds that it is the best agent for producing sleep in this affection, especially if there is an anæmic condition of the nervous system. It is less valuable where there is hyperæmia.

OINTMENT FOR SCABIES.—LASSAR'S ointment, published last week, should read:

Naphthol, grm. 5—10
Green soap
Precipitated chalk
Washed sulphur
Lanolin ää grm. 25.

—*Jour. Cutan. and Genito-Urinary Diseases*, February, 1888.

METHYLAL.—For the topical application of this new anodyne, the following is used:

Methylal	15 parts.
Ol. amygdal. expres	85 "

℞.

—*Amer. Jour. of the Med. Sci.*, April, 1888.

THE
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PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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SATURDAY, APRIL 21, 1888.

MERCURIC ALANINE IN SYPHILIS.

DR. R. DE LUCCA, Assistant in the Clinic of Prof. Ferrari in the University of Catania, has recently published, in *La Riforma Medica*, March 22 and 23, 1888, his results with alaninate of mercury (mercuric alanine). He was led to make the experiments with this compound after seeing Schmiedebarg's *Compendium der Pharmacologie*, in which it is stated that combinations of the oxide of mercury (HgO) with certain amidic acids of the fatty series (acetamide, glycocollamine, asparagine) should act well in the treatment of syphilis; and these preparations have the advantage of being very soluble and easily absorbed. Preliminary experiments on animals showed that mercuric alanine was not very toxic, and caused no local irritation when injected under the skin.

Alanine is α-amidopropionic acid, produced by the action of alcoholic ammonia on α-chloro- or α-bromopropionic acid, or by heating aldehyde ammonia with hydrocyanic acid and hydrochloric acids, the reactions being precisely similar to those by which glycerine is obtained from the corresponding derivations of acetic acid. Alanine unites with acids, bases, and salts. It crystallizes in tufts of hard needles, dissolves in 5 parts of cold water, less easily in alcohol, and is insoluble in ether. When slowly heated it melts and sublimes undecomposed; but when quickly heated it is resolved into carbon dioxide and ethlyamine. Nitrous acid converts it into lactic acid.

The alaninate of mercury used was prepared in the following manner: 1 part of alanine was dissolved in 20 parts of distilled water, which was then gradually raised to the boiling point; while the liquid was boiling it was poured over a small quantity of the oxide of mercury (HgO ?) until it was all dissolved. Then the liquid was filtered and evaporated, the residue crystallized, and a whitish substance, mercuric alanine, was obtained, which under the microscope showed the characteristic needle-shaped crystals, grouped in crosses and tufts. When thus prepared alaninate of mercury is soluble in 3 volumes of cold distilled water; this aqueous solution is perfectly colorless, clear, is changed neither by exposure to air nor light, and will keep indefinitely. In dilute solution it will not coagulate albumen; in concentrated solution its coagulating action is limited to causing a cloudiness of that part of the liquid with which it comes in immediate contact. In other respects it has the general properties of other salts of mercury.

In practice De Luca used the drug in three different solutions, of 4, 8, and 10 mgrm. to 1 ccm. of distilled water (gr. $\frac{1}{16}$, $\frac{1}{8}$, and $\frac{1}{6}$ to 16 ♏), both for internal and hypodermatic or intermuscular use. It was used by injection in 20 cases (adults); 19 cured, one improved. The quantity used daily on each patient was from 5 to 10 milligrams ($\frac{1}{13}$ to $\frac{1}{6}$ gr.). The average number of days of treatment for each patient was 37.05 days; average number of injections to each patient 27.7; average age of patients 23.2 years. In the case of improvement that was not cured the patient stopped treatment. All the cases were those of secondary syphilitic lesions. The average quantity of the drug used was 228 mgrm. (3.5 gr.) to the patient. Suppuration at the site of injection occurred only 3 times out of all injections, .53 per cent. As regards the duration of treatment, then, mercuric alanine has a slight advantage over the bichloride; as to quantity, it has a decided advantage, being about as 22.8 to 42. As to the efficacy of the alaninate, in 12 cases (out of the 20) that could be seen to find if any recurrence had taken place, there was only 1 recurrence, in a case of syphilitic papule of the larynx. From this it seems that the alaninate gives more permanent results than other mercurial preparations. Further, in not a single case in which the drug was used by injection was any stomatitis or other unpleasant effect produced.

From a tabulated statement of 20 cases treated by the internal use of the drug, it is seen that for the cure of 10 adults, with secondary syphilis, there was an average of 45.4 days and 641 mgrm. (9.9 gr.) of mercuric alaninate to the patient. Of 10 children treated 1 died on third day. For the cure of

9 children, average age 7.4 months, with hereditary or acquired syphilis, each required an average of 54.6 days and 159 mgrm. (2.45 gr.) Of these cases 6 were seen in from 8 to 9 months after treatment, and there was no recurrence in any one. There was not a single case of stomatitis, and there was only 1 case of intolerance to the drug on the part of the stomach, which was completely controlled by the administration of cocaine. As regards the internal use of the alaninate, then, it is not to be preferred to the tannate or the phenate in the opinion of De Luca, but the easy tolerance of the drug and the excellent manner in which it acts on the syphilis of infants make it an important addition to the list of antisyphilitics. The child that died was only 2 months old, and was in a desperate state when it came under treatment. De Luca claims that the decidedly calmative action of the drug gives an especially happy effect in infants.

While 40 cases may be considered a small number from which to draw conclusions, the good results obtained by De Luca show that this preparation of mercury is one well worth trying. Possibly it may be found that it will give good results in the late manifestations of syphilis.

TIGIIT LACING AND GALL-STONES.

The advocates of female dress reform and the enemies of the corset will be pleased to know that there is a causal connection between tight lacing and gall-stones. At least, so says PROFESSOR F. MARCHAND, of Marburg, in the *Deutsche medicinische Wochenschrift*, of March 22, 1888. One may be easily convinced, he says, that gall-stones and lacing-furrows of the liver are very frequently coincident, and when the situation of the lacing-furrows are observed with reference to the gall-ducts on a preparation, the whole matter becomes quite clear. As a rule the course of the lacing-furrow is obliquely across the right lobe of the liver, from which there is a tendency to atrophy, of various degrees, in the region of the gall-bladder. In the higher degrees, in which a true lacing-lobe is formed, the gall-bladder remains entirely on this part of the right lobe, and the thinned portion of the liver is just at the region of the neck of the gall-bladder and of the cystic duct. It is not infrequent, in such cases, to find the gall-bladder tightly distended, and extending far beyond the border of the liver, and in these gall-bladders stones are requently found.

Of course, there is some question as to whether we have to deal in these cases with a striking and frequent coincidence, or with a true causal relation. The first is not impossible, since both lacing-furrows and gall-stones are of frequent occurrence, and both are frequent in the female sex. Stagnation has been held to be one of the most important causes of gall-stone formation, though it is extremely probable that there is also a chemical change in the composition of the bile that plays an important part. Anything that may cause thickening of the bile, occlusion of the bile-passages, faulty evacuation, especially when the bile is thick and rich in solid matters, leads to the formation of nuclei, upon which stones are easily formed. Anything that exerts pressure on the bile-passages, especially on the cystic duct, may be considered as favoring the formation of biliary calculi. Pressure upon the border of the ribs may exert such influence. It is known that sedentary habits predispose to some degree to gall-stone.

In the case of tight lacing the pressure of the border of the ribs upon the liver acts continuously only during the day. At night there is no pressure, or much less, and then only when the tight lacing has changed the form of the thorax. This intermittent pressure, Marchand claims, actually favors stagnation of bile and the formation of concretions in the gall-bladder; it becomes distended during the day, and cannot empty itself completely at night. And, in Marchand's opinion, the first and most frequent cause of the formation of gall-stones is of a mechanical nature; and in the numerous cases that occur in women he thinks that the mechanical factor is tight lacing. And not only cases of calculi of the gall-bladder, but many cases of cancer of this viscus may be attributed, he thinks, to tight lacing, and he illustrates the manner in which the liver is pressed into by two cuts from actual preparations of cancer of the liver with biliary calculi.

It is probable that Marchand's theory is applicable to many cases of gall-stone, and some cases of cancer of the liver, in women. The deformity of the liver that is sometimes produced by the pressure of corsets and stays is a matter that almost any pathologist of large experience can testify to; and the surgical world was but a short time ago astonished to learn that Langenbuch had excised a third lobe of the liver, caused by excessive pressure.

COLLECTIVE INVESTIGATION OF SYPHILIS.

PROFESSOR KÖBNER, of Berlin, Chairman of the Committee of the *Deutsche Naturforscher und Aerzte*, has issued a circular asking for information

regarding syphilis and the methods of treating it. The circular states that the statistical publications from institutions and private observers regarding syphilis and the different methods of treating it are faulty because they contain many sources of error that cannot be properly eliminated, and because of the great inadequacy of the material published, since they deal only with the treatment of certain syphilitic symptoms, without regard to the different syphilitic individuals, though the great influence of individuality on the natural course of syphilis, uninfluenced by therapy, is recognized by all. On account of this one-sided method of making and recording observations there still remain many points in the pathology and especially the treatment of syphilis, as regarding the relations of syphilis to other diseases, for which thousands of cases might be utilized. Furthermore, it is important, for purposes of comparison, to know how other diseases, such as scrofulosis, tuberculosis, etc., are affected by the complication of syphilis and the methods of treating it. Such an investigation, well carried out, can scarcely prove otherwise than valuable.

A Faster of the 16th Century.—A recent number of the *Archives de Neurologie* publishes a report of Bucoldianus and others on a wonderful fasting girl whom the Emperor Ferdinand visited in 1542. This girl, 12 years of age, took neither food nor drink for a year, the report says, and learned men were at their wits' ends to account for the marvelous fast. In Hufeland's "Makrobiotik" is an account from the Historie de l'Académie Française, of 1769, of a case in which an insane officer took no food for 46 days. He drank only water with a few drops of brandy in it, and during the last 8 days no water. After the 36th day he was unable to stand. On the 46th day he saw a child with a piece of buttered bread, when he began to eat, and soon recovered.

Dr. C. R. Agnew.—We regret to learn from the daily papers that Dr. C. R. Agnew, of New York, is suffering from a severe attack of perityphlitis, and that there are doubts of his recovery. Dr. Sands performed laparotomy on him last week, but though some pus was evacuated the condition of the patient is very unfavorable at last accounts.

A New Culture Fluid.—Apothecary James Kunz, of Bern, exhibited to the Medico-Phamaceutical Society of Bern, on Dec. 6, 1887, a culture-fluid that has the advantage of containing no pepsine, the presence of which renders the examination of bacterial cultures for ptomaines so difficult. The fluid is colorless, so that the growth of microbes may be very easily observed. It is prepared by the digestion of albumen, ox pancreas, and water.

Training School for Nurses in Lowell.—From the *Annual Report of the Lowell Hospital Association*, January 1, 1888, we learn that a training school for nurses has been established in the Hospital, and that a course of twenty-four lectures on nursing was provided for the past winter.

A Building for the Berlin Societies.—A plan is on foot in Berlin to construct a large building for the scientific societies of the city. Most of the details have been arranged.

Professor Donders has recently celebrated the 50th anniversary of his Professorship in the University of Utrecht.

ASSOCIATION ITEMS.

THIRTY-NINTH ANNUAL MEETING,

To be held in Cincinnati, Ohio, May 8, 9, 10 and 11, 1888.

President, A. Y. P. Garnett, M.D.,
of Washington, D. C.

Papers and Discussions.

The following additional titles of papers to be read at the approaching meeting have been received since the programme was published in the issues of The Journal for April 7 and 14:

Section on State Medicine.

On Thursday.—*b*. "What Evidence is there For or Against a Malarial Germ?" by Samuel N. Nelson, Boston.

Section on Practical Medicine, Therapeutics and Physiology.

"Etiology of Typhoid Fever," by V. C. Vaughan, Ann Arbor, Mich.

"On Headache from Overlooked Causes in the Naso-pharynx and Ears, by Henry Gradle, Chicago.

Section on Medical Jurisprudence.

"Points Touching the Medical Jurisprudence of Alcoholic Inebriety," by S. L. Wright, Bellefontaine, O.

Section on Ophthalmology, Otology and Laryngology.

"Some Observations on the Extraction of Cataract without an Iridectomy, and the Use of the Band-

age in the After-treatment," by Geo. E. Frothingham, of Ann Arbor.

"Further Remarks on the Necessity for Reform in the Manner of Designating Lenses," by Dudley S. Reynolds, of Louisville.

"Fatty Tumors of the Orbit," by Jas. H. Buckner, of Cincinnati.

"A Case of Atrophy of the Bulbs of the Supercilia and Cilia, Associated with Atrophy of all the Fingernails, Microscopic Specimens of Cilia and Supercilia, and Cast of Fingers," by R. Tilley, of Chicago.

"Passive Motion in the Diagnosis and Treatment of Middle-Ear Affections, with a New Otoscope (Pneumatic)," by S. S. Bishop, of Chicago.

"The Tonsils as a Cause of Naso-Pharyngeal and Aural Disorders," by H. Gradle, of Chicago.

"Tonsillotomy, with a New Tonsillotome," by S. S. Bishop, of Chicago.

Section on Dermatology and Syphilography.

Chairman—L. Duncan Bulkley, New York.
Secretary—Fayette Dunlap, Danville, Ky.

FIRST DAY.

Address by the Chairman, "Syphilis as a Non-venereal Disease."

Discussion on "The Etiology and Treatment of Eczema," opened by Dr. Bulkley, or another.

Nervous Causation of Eczema," by E. Cheney, Boston.

"A Clinical Study on the So-called 'Prairie Itch,' 'Lumberman's Itch,' etc., with a Consideration as to its Entity," by W. T. Corlett, Cleveland, O.

"Two Cases of Pityriasis Rubra (primary exfoliative dermatitis)," by Frank Woodbury, Philadelphia.

SECOND DAY.

Discussion on "The Limit of the Period during which Syphilis can be Communicated by Contagion or Inheritance," opened by L. B. Bangs, New York.

"Double Chancre à *distance;* an Inquiry into Syphilitic Autoinoculation," by A. H. Ohman-Dumesnil, St. Louis.

"The Importance of Local Treatment in Syphilis," by Joseph Zeisler, Chicago.

THIRD DAY.

"Tuberculosis Cutis, with Report of a Case," by George T. Elliott, New York.

"Clinical Remarks on Perforating Ulcer of the Foot," by John A. Wessinger, Howell, Mich.

"The Use of Arsenic in Dermatology," by B. M. Ricketts.

"On the Value of frequently repeated Doses of Arsenic in the Treatment of Bullous Diseases of the Skin, especially in Children," by L. Duncan Bulkley, New York.

RAILWAY ARRANGEMENTS.

Attention is called to the advertisement of the Monon Route on the inside back cover of this issue of THE JOURNAL. This line has arranged to furnish physicians and their friends with the best in the land, and no one making one of this special party will regret having made the trip.

SOCIETY PROCEEDINGS.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Stated Meeting, March 7, 1888.

THE PRESIDENT, S. WEIR MITCHELL, M.D., IN THE CHAIR.

DR. JOHN ASHHURST reported a case of

SUCCESSFUL SIMULTANEOUS TRIPLE AMPUTATION FOR RAILWAY INJURY.

(See THE JOURNAL of April 14, page 462.)

DR. WILLIAM HUNT said: Dr. Ashhurst has dwelt upon the importance of saving time. There is one way in which time might be saved, and that is by more than one surgeon operating at the same time. Dr. Morton and I have done that on two occasions, each taking a limb and operating at the same time. I do not know how it would work with three.

DR. H. C. WOOD said: I should like to make a remark with reference to this point of keeping up the animal heat. Many people die in acute disease, in acute poisoning, and after severe operations, because the temperature is not maintained. I have proven by experiment that if two animals are subjected to severe injury, and one is kept in a moderately cool room, and the other in a hot room, the one will die, and the other recover. In this connection, I will repeat a suggestion made to me by Dr. Dercum, which would afford one of the most efficient measures for maintaining temperature—and that is, to fill the ordinary water-bed with hot water, and allow the patient to lie on it.

DR. CARR, of Washington, said: I did not know until I heard the remarks of Dr. Ashhurst the importance of a case that I have had. I have performed a quadruple amputation for frost-bite. The patient was brought into the hospital in a condition of collapse with the four extremities frozen. He reacted well, and remained in the hospital a week, when his constitutional condition became serious, and after consultation it was decided that amputation of the four extremities was desirable. I operated, removing one foot above the ankle, the other foot through the metatarsal joint, one forearm about its middle, and one hand, leaving a small stump of the thumb, disarticulating it at the metacarpo-phalangeal articulation. The patient did very well.

In operating I secured the vessels with hæmostatic forceps, and left the stump in that condition while I proceeded to amputate another limb.

DR. J. WILLIAM WHITE said: I understood from Dr. Ashhurst's paper that in his classification of triple amputations partial amputations were not included. I had last year at the University Hospital a double knee-joint amputation, with amputation of a portion of one hand, leaving the thumb and one finger, and should have been glad to present the patient this evening.

In reference to the technique, I have only one or two suggestions to make. If the irrigation is done with warm or hot water, it does not necessarily re-

duce the temperature, and, in fact, may aid in keeping up the bodily heat. The same is true with reference to the use of wet towels, which can be wrung out of hot water and frequently renewed. Bramann, assistant to von Bergmann, has recently detailed the results obtained at the latter's clinic by packing wounds with iodoform gauze. This prevents the formation of a blood-clot, which is perhaps, next to a failure to secure asepsis, the most important cause of the failure to obtain primary union. Where there is danger of oozing, he packs the wound with iodoform gauze, which is allowed to remain from forty-eight to seventy-two hours. It is then removed and the sutures applied; in the vast majority of cases union by first intention is secured. Even when it was left *in situ* for from four to six days such union occurred after suturing. In a case of double or triple amputation time might be saved by packing the first operative wound with iodoform gauze as soon as the vessels are secured, and then dressing it. This could be done by an assistant, and the patient removed to the ward much sooner than if time were taken to introduce stitches. The suturing could be done any time during the next two or three days.

Dr. Mitchell said: I have listened with a great deal of pleasure to the remarks as to the temperature of patients under ether or chloroform, and the possible influence of irrigation upon these cases.

I would like to ask what some of the gynecological operators would say. In their cases the abdomen is sometimes largely opened, and the intestines exposed; if irrigation lowers the temperature in ordinary surgical cases, how much more should it do so in these?

I think it would be advisable to have a series of experiments and observations as to the effects of ether, chloroform, and perhaps other anæsthetics, upon the temperature, when used for long periods. As concerns the interesting case of triple amputation shown us by Professor Ashhurst, I would like to say that no physiological statement has been made, so far as I know, as to the effect of large losses of tissue upon the pulse, temperature, nutrition, blood-pressure, amount of urine, etc. A tempting subject here awaits some industrious observer.

Dr. White said: Experiments are now being made at the University of Pennsylvania, upon animals and clinical subjects, to determine the effect of the administration of ether on the bodily temperature, and seem clearly to indicate that a drop of from one to three degrees may be expected, not only in cases where no irrigation was used, but even where no operation of any sort has been performed.

The note of a case has just been handed to me, in which the temperature fell four degrees. The temperature before operation was 99.5°, and after operation (which was the removal of a tubercular testicle) it was 95.°. No irrigation was employed. No general symptoms of shock, such as weakness or failure of the pulse, leakage of the skin, or shallowness of respiration, were observed in this case. A series of nine cases of all sorts of operations gave similar results, though the average reduction of temperature was not more than two or three degrees.

Dr. William Goodell said: In removing the ovaries, one has to be very cautious on account of the collapse that may occur if the ovary is pinched or roughly handled. Something similar, I fancy, would occur in the removal of the testicle, and this, I think, had a good deal to do with the fall of the temperature noted.

Dr. Ashhurst said: The suggestion made by Dr. Hunt is an old one. Before the days of anæsthesia it was thought that the patient might suffer less pain by having both operations done at once; but, when the patient is insensible, there will certainly be less confusion by having only one done at a time.

With reference to irrigation, as I have already mentioned, I have seen the temperature fall as low as 97° after a simple operation, and in operations not usually considered capital, such as the removal of the breast, the temperature has gone even lower, and the patient has remained in an extremely critical condition for hours. This has been where there has been no loss of blood, and no condition other than the irrigation to account for it. In cases where antiseptic measures have not been employed, I have not seen this depression, except when there has been great loss of blood, or unnecessary exposure of the patient.

In my list I have not included any but synchronous major operations. The cases reported to-night seem to have been instances of minor amputation, as regards some of the parts removed, and can, therefore, technically be looked upon as only double, not triple or quadruple amputations.

Another word with reference to irrigation; even if warm solutions be employed, they will tend to cool the body by evaporation, and the same is true with regard to wet towels; even if hot when applied, they will reduce the temperature unless covered with oiled silk, to prevent evaporation. I do not think that the administration of ether alone has much effect upon the temperature, but under any circumstances we can better dispense with irrigation and wet towels than with anæsthetics.

In regard to the case of excision of the testis, which has been mentioned, it may be said that operations on the testicle necessarily require considerable exposure of the lower part of the abdomen. It is also a well-known fact, that division of the cord is often followed by profound shock. This observation has been made by Mr. Erichsen, at the University College Hospital, London, and my own experience confirms it. The moment that the cord is divided, the pulse fails decidedly, and there is more shock from removal of the testicle than from any other operation of equal gravity in the whole range of surgery.

I have no objections to the antiseptic method of treatment, and I am in the habit of employing it, but I think we should not close our eyes to the fact that it may have some disadvantages. I think that the maintenance of the patient's temperature is of more importance than the exclusion of a few

microbes. All that can be accomplished by irrigation can be equally accomplished by washing the part before and after the operation, care being taken to keep the patient warm and dry. The ordinary antiseptic dressings were employed in this case after the operations; I consider that their chief advantage is that they permit infrequent dressing of the wound.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Stated Meeting, December 14, 1887.

THE VICE-PRESIDENT, D. S. LAMB, M.D., IN THE CHAIR.

DR. LACHLAN TYLER presented a specimen, and read the history of several cases of

RUPTURE OF ANEURISM OF THE AORTA.

Case 1.—On November 7th last, I made an autopsy of the body of a colored man, R. M., about 40 years of age, who had received medical attendance at the Freedmen's Hospital fifteen days previous to death, but had consulted no physician subsequently. He was reported to have suffered intense agony for several days, and especially hours immediately before death, the pain complained of being located in the abdomen, left side, and in the lower part of the back. I found death to have resulted from the rupture of an aneurismal enlargement of the abdominal aorta. The intestines and peritoneal replications were flecked with clotted blood, which was, however, collected principally at a point of rupture just above the bifurcation of the aorta, and then formed an intricata hæmatoma in the meshes of the surrounding cellular tissue.

Case 2.—On December 1st last, in an autopsy of the body of a white man, R. C., 38 years of age, I found that his death had been caused by rupture of the left auricle of the heart. The history of the case was to the effect that he had been accidentally run over by a dirt-cart, and died in a few minutes afterwards. No external mark of injury was observed, but upon opening the thorax the middle segment of the sternum (gladiolus) was discovered to have been fractured. The theory accepted was that the heart had been compressed between the racilient breastbone and the spinal column forcibly enough to cause rupture.

Case 3.—On December 10, 1887, I made the postmortem examination in the case of the colored man from whose thoracic cavity the specimen which you see here was extracted. He was about 50 years of age. I learned that he was a carpenter by trade and had left his home in the morning to go to work as usual, when he was suddenly stricken by death a block or two away. You will observe an aneurismal enlargement of the aorta with a stellated rupture within the line of attachment of the pericardium. The pericardial sac was filled with clotted blood and serum.

The man had experienced no dysphagia, but frequently complained of pain beneath the left shoulder-blade, and also dyspnœa upon much exertion; his feet and ankles had occasionally become œdematous. No alteration had ever occurred in the voice. Rheumatism had been complained of, but the joints had never been enlarged, and he had never been confined to bed from the disease. All the viscera according to gross appearances were in a normal condition.

DR. REYBURN thought it rare to find rupture without hypertrophy or any lesion of the heart.

DR. BRYAN saw a case several years ago when attached to the U. S. S. Powhattan, in a sailor, aged 40, stout, and round shouldered; had enlisted on account of dissipated habits. Being a sail-maker, he was compelled to bend forward most of the time while at work. Dr. B. was called to see the patient one evening about 10 o'clock, and found him suffering from hæmoptosis. Patient said he had felt perfectly well during the day; had "turned in" about the usual hour, and fallen into a sound slumber from which he was suddenly aroused by a feeling of oppression in the chest; the dyspnœa increased, and his mouth was filled with a salty fluid which he at first spat out, but which later on spurted out of his mouth. It was impossible to estimate accurately the quantity of blood, but it was thought to be over an ounce. A thorough examination of the chest was made the following day, and the heart sounds found to be normal; all over the anterior and posterior surface of the left chest from near the apex to the base numerous large and fine moist rales were heard. The percussion note was not perceptibly changed. Four days after the first attack, in disobedience to strict orders, he made some undue exertion, followed by a sensation of something giving away in his chest, and almost immediately a large quantity of frothy blood spurted out of his mouth. This hæmorrhage was alarmingly profuse—the quantity of blood lost being much greater than at the first attack. The patient rallied and rapidly regained his strength under treatment. The chest was frequently examined but nothing could be found to account for such a profuse hæmorrhage. Two months after the second attack, being called to the patient's cot, found him bleeding profusely. This time the blood was vomited, was dark and grumous at first but soon changed to normal red color. He complained of great distress in the epigastrium. Then suddenly ceased vomiting and went into collapse, dying in about one hour after the doctor was called.

The following is the result of the autopsy so far as it relates to the aneurisms: *Thorax.*—On removing sternum there was found to be a large deposit of fat on the pericardium; a small quantity of serum was found in the pericordial sac and the pleural cavities; the lungs were easily removed from the thoracic cavity; were free from adhesions, except the left which was attached by the posterior surface of the apex to the arch of the aorta and the junction of its adhesive and descending portions. On section the right lung presented a slight pigmentation, otherwise normal. The left was the seat of an intense pigmentation from apex to base. Removing the left lung

from the thoracic cavity it was detached from the arch of the aorta, and a large blood-clot was turned out of a cavity found in the posterior border just below the apex, the clot remaining adherent to the aorta. The cavity was large enough to lodge an English walnut and was found to communicate with several bronchi. The heart was next removed with the aorta attached as far down as the twelfth dorsal vertebræ. The left ventricle was slightly hypertrophied, and there were a few fibrinous clots on the aortic valves. The aorta was next laid open and in its course were found two aneurisms: one at the termination of the transverse portion of the arch which was filled with a firmly organized blood-clot; the second aneurism was situated lower in the course of the aorta, opposite the fourth dorsal vertebræ the body of which was crowded down to its center. At this point the aorta was adherent to the œsophagus, and communicated with it by a small opening. Where the tumor pressed on the œsophagus there was a large gangrenous ulcer, and it was through this that the blood forced its way into the œsophagus. At the time of the autopsy the aneurism was empty. The walls of the aorta were much thickened and the internal surface was rough, presenting numerous small elevations and depressions for some distance down its thoracic portion. There were numerous small ulcerations in some of which fibrinous deposits were found. The stomach when opened was found to contain 572 c.c. of blood.

This case is of interest from the fact that the early symptoms were latent, which rendered a diagnosis impossible. The case will be found reported in full in the *Proceedings of the Naval Medical Society*, No. 5, Vol. I.

Dr. A. F.A. King: It is remarkable that so many of these cases are latent. In some there are no symptoms that would lead us to suspect such a grave affection. He could recall the case of a former member of this Society who died from the sudden rupture of an aneurism. He had been complaining for a long time but aneurism had escaped suspicion. He made an appointment to see Dr. Donaldson, of Baltimore, but that morning, about 9 o'clock, while lying on his bed there was a sudden gush of blood from his mouth; he called to his servant to help him, but before assistance arrived he died. The true nature of the case was obscured by the laryngeal symptoms, which is often the case.

Dr. Tyler saw a case several months ago in a man 50 years old. Physicians had treated him for laryngeal trouble as there was almost complete loss of voice. He suffered for a year, and then went to the seashore where he derived much benefit. Last summer he was very much better, and the diagnosis was made the day before his death. He could not say that the information that he had an aneurism killed him but he died the day after he was told and it may have hastened it.

Dr. Freidrich presented a

CAST OF THE VAGINA PASSED AFTER THE USE OF A CONE CALLED "ORANGE BLOSSOM."

Dr. Busey would like someone to get one of these cones and have it examined. Several ladies had come to him to ask if they could use them for various uterine ailments. The Society should investigate the nature of this remedy in order to stop its use if it is such a powerful astringent and fraught with such dangers. It is being extensively advertised by female agents.

Dr. Lamb had submitted a cone to Dr. Gray, of the museum, for microscopic examination but he had failed to detect its constituents.

Dr. Busey had never seen such a vaginal desquamation. He had seen flakes and coagulated secretions, but this specimen seemed to be a cast of the entire vagina.

Dr. C. W. Richardson read a paper on

A CASE OF LARYNGEAL GROWTH.

(See page 481.)

In answer to Dr. Bermann as to the size of the tumor, Dr. Richardson said that it was about one-half inch long.

Dr. Bermann said that that explained the difficulty in finding it. His method is to quiet the patient and then seize the tumor during violent expiration. He uses Störck's instrument, which pleases him better than that exhibited by Dr. Richardson. The growth can be got through the guillotine.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

The Vice-President, W. W. Keen, M.D., in the Chair.

Stated Meeting, March 14, 1888.

Dr. Chas. Hermon Thomas read a paper on

GRADUATED TENOTOMY IN THE TREATMENT OF INSUFFICIENCIES OF THE OCULAR MUSCLES. (STEVENS' OPERATION.)

(See page 485.)

Dr. H. T. Hansell: I would like to ask Dr. Thomas for a more definite statement as to the means of diagnosis. To my mind these are not at all satisfactory. The recognition and the exact determination of superior and inferior insufficiencies are very difficult, much more so than of lateral defects.

Dr. B. Alex. Randall: I have for years taken great interest in the subject of muscular insufficiency, the more so because I have myself been troubled with a defect of the kind, which Dr. Risley corrected for me ten years ago; and with his kind aid, and independently, I have been studying the matter since. As to diagnosis, much has been written, sometimes pretty wide of the mark; and I cannot see that Dr. Stevens has improved our methods. He has brought forward a very nice set of terms for what we have long known, and he has expressed clear-cut opinions which read well. In the same way, Landolt makes out very pretty graphic charts of cases, and marks out well-defined groups, which are to be treated according to certain rules. But the cases which I meet in practice refuse very often to be included in such

categories, and very dissimilar cases afford discouragingly similar charts.

I understand from Dr. Thomas' paper that the estimation of defects is largely made with a distant object, presumably a light at twenty feet. To do this we must know the refraction and the accommodation, and I suppose that these are investigated as a matter of course. But it is not safe to take the accommodation for granted. I can myself change my exophoria to apparent esophoria by the accommodative effort, so-called; and every patient may as readily do the same.

As to correction by operation, I cannot speak, like Dr. Thomas, from personal experience. We all know that when a certain degree of error is reached it is necessary to operate, and Dr. Stevens places that point very low. His method of operating is highly praised as a delicate one, but the necessity of dividing the operation into many steps is rather unfortunate. However, if he can thus relieve epilepsy, that minor disadvantage may be overlooked. It may be said in conclusion, that except in pointing out that *hyperphoria* is a frequent cause of perplexing and irregular insufficiencies of the lateral muscles (?), Dr. Stevens has added little to our knowledge of the nature of these affections; that in his claims as to their importance, he has gone much further than the experience of equally competent and diligent investigators has enabled them to confirm him; and that in his operative treatment he has merely developed a refinement of the partial tenotomy long in use, as the only means of correcting without overdoing it, the minute deviations from the perfect balance which he deems worthy of operative interference.

DR. THOMAS: Lack of time prevented me from treating at length in the paper of the points as to diagnosis which have been made the subject of questions. There is a variability, and yet, after all, a certainty in these tests which comes as the result of practice and observation. There is an irregularity in the results of the tests from day to day, but after getting the extreme limits of the swing and studying all the circumstances of the case, one is able to strike an average which very fairly represents the error to be corrected. Then a prism is temporarily adjusted to compensate for this error; and thus we make a crucial experiment and are further guided by the effects obtained. A lighted candle at twenty feet, and the dot and line of von Gräfe at reading distance, are *both* to be employed as test objects, and a comparative study should be made of the results obtained—both in the absence and in the presence of accommodation. In this way we frequently get important clews. Sometimes anomalies appear in the action of the lateral muscles comparing the tests at reading distance with those at twenty feet; and when great erraticism of this sort is shown, we may be pretty sure in the majority of cases that we shall in the end find a manifested hyperphoria. Unfortunately, there is no known analogue of the mydriatics which we can well use in these cases, and yet with great patience and watchfulness we shall usually succeed. My results are hopeful in epilepsy, but my operations are too recent to speak positively of cure.

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Rotary Lateral Curvature of the Spine; its Present Status.

At the March meeting of the Orthopædic Section of the Academy of Medicine there was an interesting discussion on the *Treatment of Rotary Lateral Curvature of the Spine*, in which it was apparent that the dependence on steel supports formerly so universal has to a large extent been abandoned, and that the methods of Mr. Bernard Roth, of London, as described in his valuable and suggestive article on lateral spinal curvature in Heath's Dictionary of Surgery, the principles of which have for several years been advocated here by Dr. Lewis A. Sayre, are being received with no little favor by our American orthopædists. Very deep regret was felt at the absence on this occasion of Professor Sayre, who is the Chairman of the Section; but he was ably represented by his two sons, who have already won an enviable distinction in the department of surgery which his achievements have so long and so brilliantly adorned.

The paper of the evening was by Dr. Samuel Ketch, and its title was, *The Present Status of the Treatment of Rotary Lateral Curvature of the Spine.* By this condition he said he wished to be understood as meaning that lateral deviation of a portion or the whole of the vertebral column which shows as its most constant factor the rotation, torsion or twisting of the bodies or segments of the bodies of the vertebræ, with accompanying or consecutive alterations in the shape of the thorax. No deformity, he thought, exhibited in its slow, insidious progression, its involvement of area, its secondary effects on important external organs, so decided alterations of form and such marked disturbances of function as this. When it became recognized that the condition we had to deal with was but the effect of some cause, some irritation, in fact, the exact nature of which was as yet unknown, it would be seen that the problem of treatment embraced something more than the attempt to remove the mechanical results of such cause by the use of opposing mechanical means.

The present treatment of the disease, he went on to say, consisted principally of two methods, or a combination of the two, viz.: by apparatus and by exercises, or by the combined use of the two. Having stated that he did not think it necessary to speak in detail of the treatment by complete recumbency or that by cutting of spinal muscles (tenotomy), both of which might be useful adjuncts at times, he referred to the apparatus now used as being of two varieties, progressive and fixative. He strongly condemned treatment by the constant action of cumbersome and heavy instruments which, by their abnormal pressure, often gave rise to large excoriations, and even sloughs, of the skin. In his opinion, no lever brace should be used for any other purpose than simply that of retaining the spine in an improved posi-

tion, previously obtained either by appropriate manual exercises or combined manual and gymnastic movements. Such braces should be light, easily movable, to allow of inspection of the parts, and simple enough to be easily applied by those having the home care of the case. The second class, or fixation apparatus, were originally constructed with the idea of firmly immobilizing the distorted spine in an improved position, obtained by suspending or extending the patient. This original plan had been modified to the extent of opening the brace in front, whether constructed of plaster of Paris, poroplastic felt, leather, or other material, with the object of easy removal, in order to allow proper exercises, and give attention to the subjacent parts.

In regard to the matter of exercises he said that he attached most importance to those which had for their object the "unfolding" of the twisted vertebral column. These could be applied with the greatest precision and benefit by means of the surgeon's hands, and no appliance could rival the ease, proper application of pressure, and safety which such exercises afforded. Their success, however, depended on detail, and they should always, therefore, be given either by the surgeon himself or a thoroughly trained assistant.

As to the matter of a cure, in his opinion this involved not only the restoration of the lateral deviation, with its normal curves, but also the disappearance of that most constant feature of the deformity, the rotation. As generally understood, however, a cure implied only the prevention of further deformity or an amelioration of the condition originally observed. In the cases observed by him he had never been able to convince himself of the entire disappearance of rotation; while he believed it to be essential that this symptom should be prevented or removed before a vertebræ could be considered as restored to a perfectly normal state. It was in the direction of prevention that he thought the most signal success could be achieved; and it was only by the earliest recognition of the symptoms and an appreciation of their importance that prophylaxis could be accomplished.

In a paper on lateral curvature which Dr. Ketch read before the Section two years ago, which was based on 229 typical cases presenting the deformity in question, he had made three divisions of cases: *first*, those in which the deformity was first observed from the first to the twelfth year, or during the age of childhood; *second*, those in which it was first observed from the twelfth to the eighteenth year, or during the age of puberty; and *third*, those in which it was first observed after the eighteenth year, or during the age of complete development. During the period of childhood the deformity occurred in 120 cases, or over one-half of the whole number, and among the conclusions at which he arrived in the paper were the following:

1. Rotary lateral curvature is principally a disease of childhood, and may be either congenital or acquired.

2. The disease should be looked for early in life, and as a factor in early treatment the careful inspection of children's spines becomes most important towards the prevention of deformity.

He did not mean to say that, even were the spines of young children to receive the utmost care, and at the first suspicion of deformity the child were taken to a surgeon, that we should not have lateral curvatures; but he felt convinced that the inveterate deformities now seen in so large a number would be few and far between.

Dr. Phelps thought that in lateral curvature, if there were changes in the bone, no apparatus or gymnastic exercises would cure the deformity; but at the same time it was of advantage to suspend the patient and, having got him into the best position, to secure this permanently by some fixed apparatus. Stillman's brace was probably the most satisfactory steel instrument that has as yet been devised; but so far as his experience went, the plaster of Paris jacket had proved by far the best appliance at the command of the surgeon.

Dr. A. B. Judson said that he had an aversion to using mechanical support in lateral curvature, and he did not know that he had ever seen a case in which he had found mechanical pressure do any good. In many cases it would be likely to increase the deformity rather than to diminish it, if it were applied with much force. If direct lateral pressure were employed the force would fall upon the ribs and be transmitted to the vertebræ, and this would only intensify the existing curvature. If direct pressure could be brought to bear upon the bodies of the vertebræ it would accomplish what was wanted; but this was manifestly impossible, and he did not think that oblique force could be applied with advantage. While he did not believe in the use of mechanical pressure to any extent, he had adopted a certain system of therapeutics which seemed on the whole to be satisfactory, although it was somewhat difficult to give the details of this treatment.

In the first place he thought it advisable to place the patient in such a position that the deformity was reduced as far as practicable, and then have him remain in that position as much as possible each day. He recognized the importance of superincumbent weight in the direct causation of the deformity; so that it was fair to assume that if the individual could have always been in a recumbent posture the lateral curvature would not have occurred. Hence he thought it desirable that, as a part of the treatment, he should lie down as often as possible in his waking hours, and he was in the habit of instructing his patients to do this for two, three, or more hours in each day. Again, when the patient was lying down he believed it important that he should remain on his back, and not only on his back but in such a position that a lordosis was produced. This was accomplished by placing an air pillow blown up to its full extent under him in such a way that the shoulders and hips hung down on each side of the pillow. The reason for this was perhaps a little theoretical. In the rotation of the spinal column it was clear that the anterior portion of the vertebræ was most at fault. The same was true in Potts' disease, the disease being located in the anterior portion of the vertebræ, and

therefore in Potts' disease also we produced a lordosis if possible. We removed the pressure from the anterior part of the vertebræ to the posterior.

There was another position in which the patient was comparatlvely free from the deformity, and that was when the body was suspended through the action of the pectoral muscles, and for this purpose the horizontal bars, rings in Sayre's suspension apparatus were of value. In this connection Dr. Judson referred to the theory of Dr. Henry G. Davis, who claimed to have cured certain cases of pulmonary phthisis by increasing the capacity of the lungs in this way. It was well known that rotary lateral curvature produced deformity of the chest and reduced to a greater or less extent its capacity. Therefore, whatever would increase this capacity would tend to improve the curvature.

In regard to those inveterate cases which are regarded as incurable, he said he had never as yet had any such cases under treatment; but if he had a case which he thought was likely to go on to this condition, he would be more strenuous than nsual in carrying out the various measures to which he had alluded. In such a case he would, furthermore, use an apparatus, but it would be one in which no lateral pressure whatever was exerted. It would be a brace which would keep the spine in a state of lordosis.

Dr. Reginald H. Sayre said that he agreed with Dr. Ketch in the opinion that preventive rather than curative treatment was what we must aim at in lateral curvature. He could also bear out the correctness of his observations as to the occurrence of the disease in early life. He had seen one case in which the curvature was said to have been present at birth, and another where it was noticed at the age of 6 months; while he had personally observed one case at 2 months. As for getting a perfect restoration to the normal form, he believed it to be possible only in those cases where there was very slight rotation. Those which presented considerable rotation and curving of the ribs, he thought, could never be restored completely to the normal shape. They might, however, be benefited, and he had been surprised to see the amount of improvement attainable in very advanced and, at first sight, apparently hopeless cases.

If possible, he said, he would treat a case by gymnastics and massage alone, with the object of educating the muscles of the patient and enabling him to retain such improvement of position as he could make by manipulations and exercises which, being different in various cases, it would take too much time to describe on the present occasion. If a case were sufficiently distorted to require mechanical support also, or if it was necessary on account of paralysis, he would use a plaster of Paris corset, as he had never seen a case which became worse under this mode of treatment. On the other hand, he had seen a number of most frightful distortions under instruments of various kinds, applied while the deformity was very slight, as attested not only by the statements of the parents, but also by photographs taken at the time of beginning treatment; and as this result had followed instrumental treatment in the hands of various physicians of large experience, with patients whom he had found most obedient in following out instructions, he was forced to the conclusion that the fault lay in the method. His patients who had worn both braces and plaster of Paris jackets all gave testimony in favor of the superior comfort of the latter; a circumstance which, he said, would lead him to use this method even were the results no better than those obtained by instruments. When, however, he saw improvement in patients who had steadily grown more crooked during years of instrumental treatment, he felt more and more that most of the machines which he had seen were worse than useless.

Dr. Ridler said that he thought that surgeons were not sufficiently definite as to what they meant by cures, and what by exercises. He was in the habit of dividing the cases which he saw into three classes for prognosis and treatment. In the first class there was little or no rotation, and the spine could be put into what seemed to be the normal position for a brief space of time. In the second there was more or less rotation and rigidity of two or more segments of the spinal column, and the deformity could not be reduced; but pain and weakness were absent. In the third there was marked curvature and rigidity and, in addition, pain and weakness. In the first class of cases he believed that a cure could be effected, and here he deprecated all use of apparatus in the treatment. In the second he was inclined to think, with Mr. Bernard Roth, that the spine could be made straight and the rigidity overcome. Gymnastic exercises were of great service, but mechanical means seemed to him of somewhat doubtful value, although in certain instances he resorted to them. In the third class the spine could not be straightened, or the rigidity overcome; but the patient could be made to carry himself in better form. Here he was accustomed to furnish certain exercises, and in addition to use an apparatus which would act somewhat like the hand of the surgeon in correcting the deformity. Of course, much could be done by baths, massage and electricity; but more could be accomplished by the use of suitable gymnastic exercises than by any other means.

In the matter of exercises Dr. Ridler strongly advocated the system of Roth, in which the "keynote" position in which the patient is to be exercised is described as that position of the trunk and arms in which the greatest improvement in the position of the spine is obtained. A cure, he said, was considered by Mr. Roth to have been accomplished when the patient was so educated that the best possible position became an habitual one. If we knew just what we could accomplish in any particular case, a definite plan of treatment could be adopted, which was much preferable to the uncertain and slipshod methods which had been so long in vogue.

Dr. Gibney stated that he was now hard at work putting Roth's system to a practical test. Among the points which had not been taken up in the discussion was the subject of measurements, and he thought it was of the utmost importance that some definite system should be adopted upon which all orthopædic surgeons could agree. In carrying out

Roth's method it was very difficult, he went on to say, to get dispensary patients to come to the surgeon every day, and he had recently organized an evening school of gymnastics for young girls affected with spinal curvature. Their powers of resistance seemed, as far as he was able to judge, to have developed wonderfully already, and the experiment bade fair to be a very successful one.

In closing the discussion Dr. Ketch said, in reply to Dr. Judson, that he thought any analogy between inflammatory disease of the vertebræ and lateral curvature was inadmissible. It seemed to him, also, that Dr. Judson had been especially fortunate in not having met with any of those inveterate cases referred to in the paper and the discussion. He then remarked that there was no deformity so much like that of club-foot as rotary lateral curvature of the spine. The former condition, however, was usually detected soon after birth, and measures were taken to correct it. Hence we met with much fewer cases of inveterate club-foot than of lateral curvature, since the latter was not, as a rule, treated at a sufficiently early stage. After all, the prevention of deformity was the point on which he desired to lay most stress. He believed that no two cases were alike, and whatever the plan of treatment adopted, frequent inspection and the most careful watching were essential on the part of the surgeon. P. B. P.

LETTER FROM BOSTON.

(FROM AN OCCASIONAL CORRESPONDENT.)

The Murdock Liquid Food Company.

There has been considerable interest in medical circles in this vicinity over a discussion in some of the secular and professional journals about a certain food preparation, manufactured in Boston. Believing that this interest is not confined to the Hub alone, perhaps a few words may be written of interest to those more or less remote from the centre of action. We refer, of course, to the Murdock Liquid Food Company, of which the principal, Mr. Murdock, is the active agent in maintaining for over a year a hospital in the building devoted to the manufacture of their food preparations, the latest of which is "Food Suppositories." This, the "Free Surgical Hospital for Women," is apparently the climax of Mr. Murdock's charity, liberality, and ambition, following his "West End Boys Home" and "Infant Hospital." This building is situated in the newer district bordering on the aristocratic Back Bay of Boston, is easily accessible by horse-cars and occupies a conspicuous corner. It is of brick, several stories high, and, as said above, is devoted to the preparation and putting up of the food, and to the hospital supported from the proceeds of the same. Of the merits of the food as such, we will make no remark, beyond stating that it has been commented upon in a late number of the *Boston Journal of Health*, and also state that in many of Mr. Murdock's wide-spread advertisements, he claims that under this food many patients recover without the need of any operation. The main entrance is to the office, in the corner of the building, the entrance to that part of the hospital devoted to the regular profession being on the left of this, while that for the Homœopathic hospital is on the right. Over the entrance to the office is a large terracotta representation of the Bulls, colored prints of which are so often seen in apothecary stores. The office is beautifully fitted up, there being oil paintings on the walls, referring mostly to the reputed components of the liquid food, fruits, mutton and beef, and also many pictures representing the different processes of reproducing pictures. One or two paintings lay claim to some old master, and the paintings of the Bulls is here, all pleasing to the eye of the observer. Scattered about are groups of well-known statuary. Adjoining this office is the elegantly equipped office of the journal published by the company, *Annals of Gynecology*, edited by Dr. E. W. Cushing. This journal is probably well-known to most of the medical profession in the United States, enormous numbers having been circulated of the first three issues, in order that every member of the medical profession in the country might become acquainted with it.

Just here we will say, that many modern conveniences are found in this building, electric locks guarding the doors, electric clocks telling the time, and the building is lighted by electricity, has an elevator, and in fact is a well equipped building. In the basement is a large engine to furnish power for the system of indirect heating that Mr. Murdock has inaugurated: the air comes from the roof, by means of fans to chambers heated by steam pipes, whence it is delivered to the different rooms at a proper temperature, within a few seconds. The second floor of the building is devoted to the manufacture, (for account see February, 1888, number of *Boston Journal of Health*,) bottling and storage of the preparations, while the third floor is devoted to the Hospital and its appurtenances. The Hospital is in reality two, they being entirely distinct and separate, each having its own entrance from the street for patients and visitors, and each having its own staff made up of gentlemen of the Regular profession on the one side, and of the Homœopathic belief on the other. Each has its own operating room, small and large wards, etherizing room, waiting rooms and necessary sanitary arrangements of a hospital. One of the wards on the regular side is called the Fabiola Ward in memory of founder of some Roman Hospital. The convalescent patients of both sides eat at the same table, one kitchen doing the cooking for both. In the regular side are special wards for septicæmic and cancer cases, and also a well equipped laboratory for such bacteriological and pathological work as may be of interest to surgical gynecological work. The combined hospital will accommodate about 150 patients. Dr. E. W. Cushing has charge of the regular side, and Dr. Packard of the Homœopathic. It was in this hospital that Dr. Martin, of Berlin, operated while in Boston, performing his operation of removal of the uterus through the vagina.

Each patient is required to take a certain quantity

of the food at each meal, before and after treatment, and, as was previously mentioned, some have recovered on this alone, and a list of the number of operations may be seen in almost every newspaper published in Boston.

A few words in regard to the discussion: As has been said, the Hospital has been under operation for over a year, and as Mr. Murdock states in his advertisements, one side is under the management of gentlemen belonging to the Massachusetts Medical Society, these gentlemen being connected with it from the start. The whole thing has been looked upon as not exactly the proper thing; still, nothing was done, and things simply took their own proper course, till the *Boston Journal of Health*, in a series of articles exposing fraudulent and deceptive foods and medicines, took up "Murdock's Liquid Food" among the number, exposing the falsity of the preparation, composition, and profit in a lengthy article. Mr. Murdock then saw fit to answer this, stating why he thought the article had been written, and denying some of the statements, making quite a breezy article: To this the *Journal* replies only in stronger terms, denouncing in emphatic language the preparation, and replying to some of Mr. Murdock's statements or rather mis-statements; things were getting interesting.

In the meantime Dr. Marcy, who had severed his connection some time previously to any thought of the discussion, published in the *Boston Medical and Surgical Journal*, a card stating his previous withdrawal from the Murdock Hospital, and giving as his reasons for so doing that the hospital was not acting up to its agreement, in regard to running and management of the hospital. Immediately, Mr. Murdock replies in the following number of the same journal, contradicting flatly some of Dr. Marcy's statements, and referring to letters of the Council of Ethics of Massachusetts Medical Society, in commendation of the enterprise, which in the next issue of the *Journal*, was flatly contradicted by the Council, thus leaving the way open for Dr. Cushing to show the letter which they claim he has not.

Here the matter rested, and interest is still maintained as to the outcome. Mr. Murdock has very much retracted and modified his advertisement in the daily papers, but probably with the means at his disposal, among which may be reckoned the *Annals of Gynecology* and the hospital, will endeavor to keep before the public the merits of his food preparations, while the *Journal of Health* intends pushing its exposé, and bring the whole thing plainly and truthfully in its proper light, along with others, the latest being Scotch Oats Essence.

I hope we have not wearied you with this account of our little tempest in our medical teapot, which has been written only with the idea that some of the wrath and fury of the storm may have bubbled over, and reached the outside world, thus concerning, perhaps, others than the ones directly interested.

W.

DR. OLIVER WENDELL HOLMES has presented his medical library to the Boston Medical Library Association.

INVERSION FOR SUSPENDED ANIMATION IN ANÆSTHESIA.

Dear Sir:—In THE JOURNAL of April 7th, is an editorial on the recent paper of Dr. J. J. Chisolm, entitled, "A very valuable lesson for those who use anæsthetics." It is customary, I think, for a writer or a reviewer in papers like those just mentioned to allude to the published observations of others who have experimented in the same field. I have not a copy of Dr. Chisolm's article and do not know what reference is made to other observers. The general reader would, however, infer from the editorial that what had been written previously had escaped the attention of the author and of the editor.

The subject of position is cases of apparent death from the use of chloroform is of great importance. After repeated experiments in cases of slight and alarming symptoms during the administration of chloroform, I became convinced that a sure remedy was at hand in every such case. If death has occurred, there is reason to believe that there was carelessness in watching for the *first* cessation of breathing and of the heart's action, and that there was an attempt to use other means *previous* to the complete inversion of the patient.

As an interne in the Massachusetts General Hospital I once aided a distinguished surgeon in holding suspended by one foot, a boy with a crushed thigh, who was, as it were, dead. He was held in this position till life reappeared. My own observations and experiments were made in 1867–8, and were published in the Transactions of the Illinois State Medical Society for the year 1868. Portions of this paper were copied in the work of Prof. H. M. Lyman on "Artificial Anæsthesia," etc. The story of Piorry, Nélaton and the rats was entirely unknown to me at the time I made my report. The late Dr. J. Marion Sims, and a physician in New Orleans, whose name I have forgotten, published articles on this subject some years since. E. L. HOLMES, M.D.

Chicago, April 16, 1888.

[The limits of editorial space precluded the publication of the names of men that have used inversion in the cases under consideration, and their experiments. The writer of the editorial article in question knew that inversion has been used by other men than Dr. Chisolm, and he himself has used it successfully in two cases in which he was the administrator. Obviously, also, it is impossible for a writer to search such inaccessible literature as State Society Transactions for possibly existing papers. The editorial was not written to tell something actually *new*, but to call attention to a method that has given good results in the hands of a surgeon of vast experience.—ED.]

RUPTURE OF FUNIS.

Dear Sir:—On April 4th I was called to see Martha Brown (col'd), who had given birth to ten children. She had been in labor for about forty-eight hours. The head had been born about four hours before I saw her, and with the uterus most powerfully contracting failed to make any further

advance. I found the child dead, with the cord around the neck, the epidermis removed from the greater part of the face and neck. By gentle manipulations and traction I very soon succeeded in delivering the child and found the funis detached from the umbilicus and greatly diminished in size. The length was about normal. I found the placenta partially attached to the fundus with hour-glass contraction.

The fœtus, from the statement of the woman, must have been dead for more than a week as she received a fall from a fence and had felt no movement since. Antiseptic precautions were strictly enjoined, and she is now doing well, having had for a day or two a slight rise of temperature.

Rupture of the funis with the mother in the horizontal position, with normal length of cord (as in this case) has been reported in only two cases. One by Späth (fœtus macerated) and one by Dupuy. To these Budin (Paris) adds two cases.

B. A. DUNCAN, M.D.

West Point, Miss., April 10, 1888.

STATE MEDICINE.

STATE SANITARY CONVENTION

At Lewisburg, Union County, Pa. To be held under the auspices of the State Board of Health, Thursday and Friday, May 17 and 18, 1888.

PRELIMINARY ANNOUNCEMENT.

(Subject to amendment.)

FIRST DAY.

Opening Address, by His Excellency, the Governor of Pennsylvania.

Address of Welcome, by D. J. Hill, LL.D., President of Bucknell University.

"The Prevention of Contagious Ophthalmia," Dr. P. N. K. Schwenk, of Philadelphia.

"Diseased Meats and the Prevention of Trichinosis," Dr. G. W. Furey, of Sunbury, Pa.

"The Water Supply of Lewisburg," Prof. W. G. Owens, Bucknell University.

EVENING SESSION.

Annual Address, Hon. S. T. Dans, M.D., Lancaster, Pa.

"Cremation as a means of Disposal of the Dead," Dr. B. F. Hyatt, of Lewisburg, Pa.

SECOND DAY.—9 A.M.

"Small pox in Country Places," Dr. Fetterolf, of Mazeppa, Pa.

"Hygiene of the Teeth," Dr. H. Gerhart, of Lewisburg, Pa.

"Insanity Among Women," Alice Bennett, M.D., Resident Physician, State Hospital for the Insane, Norristown, Pa.

"Sanitary Protective Associations," Benj. Lee, M.D., Sec'y of the State Board of Health.

"Sanitary Shortcomings of Lewisburg," Dr. W. B. Atkinson, Sec'y Penna. State Medical Society, and Medical Inspector to the State Board of Health.

AFTERNOON SESSION.

"School Hygiene," Dr. G. G. Groff, of Lewisburg, member of the State Board of Health.

"Household Hygiene," Prof. Frances Emily White, Women's Medical College, Philadelphia, Pa.

"How Germs Cause Disease," Dr. V. C. Vaughan, of Michigan University.

"The Drainage of Lewisburg," Mr. S. D. Bates, of Lewisburg, Pa.

EVENING SESSION.

Illustrated Lecture, Dr. Edwards, of the State Board of Health.

Papers are also expected from Dr. J. H. Kennedy, Shamokin, Pa.; Dr. A. Schultz, Superintendent of the State Hospital for the Insane, Danville, Pa.; and other distinguished scientific men.

It will be observed that while distinguished sanitarians from a distance will take part in the proceedings, the aim has been to make the latter, to a considerable extent, of practical use to the citizens of Lewisburg and its neighbors, and to enlist them in the study of its sanitary problems. For this reason they will be of great interest to all residents in small towns and rural districts, the conditions of which are necessarily very similar. The Convention will be presided over by the Hon. S. T. Davis, M.D., member of the State Legislature, of Lancaster, Pa.

A more definite programme will be issued later.

GEORGE G. GROFF, M.D.,
BENJAMIN LEE, M.D., Sec'y,
Committee.

NECROLOGY.

CALVIN ELLIS.

Calvin Ellis, M.D., was born in Boston, August 15, 1826, and died on December 14, 1883. He was a lineal descendant, in the seventh generation, of a farmer named Ellis who with some of his fellow-townsmen emigrated to New England in 1634 from old Dedham, County of Essex, England. Dr. Ellis was fitted for college at the Chauncey Hall school in Boston, and entered Harvard in 1842. His classmates remember him as a modest, genial companion, active in athletic sports, and ranking so as to secure a commencement part. Dr. Ellis used to say of himself that he played in college and "first awoke to to the full meaning of life when he began the study of medicine." He entered the Harvard Medical School in 1846, and immediately won the attention of his teachers by his diligence and marked proficiency. Appointed in 1849 as resident pupil in the Massachusetts General Hospital he was noted as an assistant who carried out orders promptly and implicitly. After taking his medical degree, in 1850, he spent two years in the French and German hospitals, making a special study of clinical medicine, morbid anatomy and pathology. On returning to Boston he

was chosen as Assistant in Pathology to Prof. J. B. S. Jackson, and soon became Admitting Physician and Pathologist at the Massachusetts General Hospital. In 1863 he was made Assistant Professor of Theory and Practice of Medicine in the Harvard school, and in 1865 was appointed Adjunct Professor of Clinical Medicine. Two years later he attained to the Chair of Professor of Clinical Medicine on the resignation of Prof. H. J. Bowditch. Still later, Dr. Ellis was chosen Dean of the Harvard Medical School, in which capacity he exerted a powerful influence upon the history of that school.

Such, in brief, is the outline of Dr. Ellis' official career. In appearance he was a quiet, modest man, with a square jaw and firmly-closed mouth, but with a kindly, genial eye. His bearing was dignified and possessed that element of personal reserve which repelled undue intimacy but had no tinge of coldness about it. His influence upon students was in the highest degree beneficial, for they constantly felt the force of his sterling character. He was a zealous champion of the dignity and honor of his profession and never allowed its standard to be lowered without instant challenge. In his intercourse with students he was democratic and he was quick to recognize and encourage any gleams of ability which they might show. We remember the pleasure which lighted his face at one time when he was assured by a recent graduate that he had won not only the respect but the personal love of his pupils.

Dr. Ellis was not a prolific or constant writer, but he contributed a number of valuable articles to various journals, and during his long illness he began a work upon Symptomatology in which he strove to embody his ideas of the proper method for clinical study. The two chief accomplishments of his life are associated with his Deanship and Professorship. As Dean of the Harvard Medical School he labored with all the energy of his vigorous nature to organize and push forward the new departure by which the school was converted from an association of disjointed lectureships into a university system of graded courses. In this work he was opposed by the conservatism of some of the older men who failed to grasp the true significance of the movement, but Dr. Ellis' energy was unquenchable and he lived to declare that all his plans regarding the school had been carried out to a successful issue. The men who worked with him testify to-day to the encouragement which he gave them and to the unswerving faith which he had in their ultimate success.

He was a warm supporter of medical organizations and joined the American Medical Association in 1853; attended meetings in 1855 and 1865.

The other fruition of his life work stands to-day as his monument in the Harvard method of clinical instruction. Despising cheap exhibition of expertism and "snap" diagnosis, Dr. Ellis insisted upon a rigorous method of differential analysis in every case which came before him and his classes. No matter how simple the case or how obvious the diagnosis, he compelled his students to give their reasons for their opinions, and to defend them against adverse criticism. Such a laborious process of eliminative diagnosis sometimes seemed finical to superficial observers, but hundreds of young practitioners to-day gladly testify to the benefits which they enjoy as the result of the exacting precision of his methods.

Dr. Ellis was an enthusiast in the best sense of the term, and he ardently loved his profession, and throughout the suffering and feebleness of his long sickness, one needed only to mention the subject of clinical instruction to arrouse in him all his old-time fervor. The closing hours of his life were in harmony with his whole career. He diagnosed his ailment as acute peritonitis from the perforation of a duodenal ulcer, and as he watched the steady approach of death, his mind was only intent upon softening for others the sorrow of separation. He was a noble example of true manhood and a lovable friend.

G. M. G.

HENRY LYMAN SABIN.

Henry Lyman Sabin, M. D., of Williamstown, Mass., a son of Jesse Sabin and Esther Bulkley, was born at Williamstown, Mass., May 29, 1801, died at his residence February 24, 1884. At an early age he was sent to Lenox Academy, and subsequently entered Williams College, where he was graduated at the age of 19. He taught school after he left college, and studied medicine at Chatham, N. Y. He attended Lectures at the Pittsfield Medical School and at New York. After completing his medical education he returned to Williamstown, where he commenced practice, and continued for over fifty years. During this period he endeared himself to the people of his native town, and no man ever lived in the community who was more beloved. No man knew more intimately and sympathetically the lives of the people among whom he practiced than Dr. Sabin. He shared in their joys, sorrows, hopes, and associations. Outside of his profession Dr. Sabin assumed his full share of public duties. His religion was the old-fashion, genuine New England article, and for just half a century he was deacon of the Congregational church. When abolitionism was a reproach, Dr. Sabin took it up with unselfishness, made his house a centre for its advocates, and he preached temperance when New England rum was a popular beverage. He never narrowed his interests within his immediate limits, but kept abreast of the great popular movements outside. He early became a Republican, was sent to the lower branch of the Legislature, served with credit in the Senate of 1857, and was prominent in county affairs. In 1850 he was President of the Massachusetts Medical Society; he was for many years a trustee and also medical examiner of the Northampton Lunatic Hospital. For more than thirty-five years he was one of the board of trustees of Williams College, having assumed the office in 1838, about the time Mark Hopkins became president. Dr. Sabin enjoyed the official association and was cordially esteemed by his associates of the board, among whom was for many years his classmate, the Hon. E. C. Benedict, of New York, Judge of the United States District Court.

He joined the American Medical Association in

1864. Probably no citizen of his county possessed a finer vein of natural eloquence than appeared in Dr. Sabin on many public occasions. He was admirable as an occasional extempore speaker, shining in after-dinner efforts, when the inspiration of warm feeling was guided by nice native tact. A brilliant and touching example of this power that never left the doctor was shown at the grave of his wife. The event was peculiarly sad, for she was buried on their golden wedding day, and preparations had been made for celebrating that anniversary. When the body was lowered to its rest, Dr. Sabin thanked his neighbors of half a century for their kindness in words of simple pathos. It was a touch of nature that illuminated the formalities of Puritan burial with a light as clear and tender as a gleam of sunshine. The home thus broken had been the centre of a refined and gracious hospitality, and in it the members of the County Medical Society had been bidden to celebrate the golden wedding of the local father of their profession.

Dr. Sabin was bound up in his household, and carefully cherished all family associations. Few men, indeed, have ever been more widely loved or better deserved the general respect. Dr. Sabin was twice married; his first wife, Lucy Whitman, survived only about a year. He subsequently married Abby, daughter of Nathan Benjamin, of Catskill, N. Y. As the issue of this marriage there are now five children, viz.: Nathan Henry and Charles, and three daughters. Dr. Sabin survived his second wife only about ten months. N. H. S.

BOOK REVIEWS.

THE YEAR-BOOK OF TREATMENT FOR 1887. A Critical Review for Practitioners of Medicine and Surgery. 8vo, pp. 336. Philadelphia: Lea Brothers & Co. Chicago: A. C. McClurg & Co.

This is a very good compendium of the changes that have occurred in the use of medicine during the year. The series of which this is a volume is well known, and extended comment is hardly necessary. It will be found exceedingly useful by those who wish in collected form an abstract of the therapeutic literature of the year. Each department is ably edited by the following collaborators: Diseases of the Heart and Circulation by J. M. Bruce; of the Lungs and Organs of Respiration by R. Douglas Powell; of the Nervous System by James Ross; of the Stomach, Intestines, etc., Sir Dyce Duckworth and Robert Maguire; of the Kidneys, Diabetes, etc., by Chas. H. Ralfe; Rheumatism and Gout by Robert Maguire; Anæmic and Allied Conditions by Sidney Coupland; Medical Diseases of Children by J. F. Goodhart; Continued Fevers by Sidney Phillips; General Surgery by F. Treves; Orthopædic Surgery by W. J. Walsham; Surgical Diseases of Children by Edmund Ourus; Genito-urinary System by Reginald Harrison; Venereal Diseases by Alfred Cooper; Diseases of Women, D. B. Hert; Midwifery, G. E. Hermike; Skin, Malcolm Morris; Eye, Henry Power; Ear, G. P. Field; Throat and Nose, P. McBride; and Summary of Therapeutics of the Year by W. G. Smith.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By JOHN V. SHOEMAKER, A.M., M.D., Professor of Skin and Venereal Diseases in the Medico-Chirurgical College and Hospital of Philadelphia. With colored plates and other illustrations. 8vo., pp. viii, 633. New York: D. Appleton & Co. 1888. Chicago: A. C. McClurg & Co.

This book has an advantage for the general reader over most works on diseases of the skin, in that the new dermatological technical words and phrases are dispensed with as much as possible. The consideration of the different diseases of the skin is preceded by some general considerations on anatomy, physiology, symptomatology, diagnosis, pathology, etiology, treatment, and prognosis. The treatment recommended for different diseases is such as almost any practitioner may carry out. Half a hundred pages of formulary, and a good index, complete the book.

MISCELLANEOUS.

COCAINE ADULTERATIONS AND IMPURITIES.—At the meeting of the Pharmaceutical Society of London, on March 14, Dr. B. H. Paul discussed this subject in a paper.

Samples of the hydrochlorate of cocaine may be classed as crystalline and amorphous, and it is well to note that the author of the paper doubted whether the salt in a pure state ever assumed the amorphous condition. In fact, salts which are crystallizable with difficulty are in all cases mixtures, in various proportions, of cocaine salts with other salts of a different nature. The test of purity, based on the more ready solubility of the non-crystallizable portion of the salt in chloroform, is not altogether reliable, and the weight of the crystals obtainable on the neutralization of an aqueous solution by ammonia is stated to be preferable. Some investigators professed to have identified an impurity, which they called "hygrin," the presence of which accounted for the difficulty with which certain specimens are crystallized. This substance, however, Dr. Paul considers to be apocryphal, although it is evident that a product known as "amorphous cocaine" is not infrequently present, and admits of identification. Its hydrochloride is the usual impurity. It is of a pale yellow color, a bitter taste, and of feeble anæsthetic properties. It has an alkaline reaction, and is sparingly soluble in water, though freely so in alcohol and ether, differing in this respect from the pure salt. A dilute solution becomes milky on the addition of ammonia, and remains so. The aqueous solution of this neutral hydrochloride becomes acid on boiling, and this accounts for the tendency of solutions of cocaine to become acid. Cocaine itself readily undergoes decomposition with benzol ecgonine, on being treated with alcohol or water, and this constitutes another source of impurity in the course of preparation. To obtain a pure product, the alkaloid itself should be dealt with and not the hydrochloride, which is wasteful because of its extreme solubility. It would appear from these results that the quality of cocaine hydrochloride varies very much. In fact, as Dr. Paul observed, the salt is sold at a price far too low to ensure its purity. The makers who produce a good salt are heavily handicapped in the competition with others who supply an inferior article at a low price. —*British Medical Journal*, March 31, 1888.

"SCOTCH OATS ESSENCE."—In the April number of the *Druggist's Circular and Chemical Gazette*, for advance sheets of which we are indebted to the manager of that excellent journal, Dr. R. G. Eccles, of Brooklyn, gives an account of his

analysis of a nostrum known as "Scotch Oats Essence." He declares that the preparation is about one-third alcohol, and that each ounce of it contains nearly ½ gr. of morphine, notwithstanding the fact that it is "pledged to destroy the morphine craving and 'free the victim from his terrible bondage.'"

Commenting on the matter, our contemporary says editorially:

"For many years oats have enjoyed an excellent reputation as an article of food. There has been a run, so to speak, on the oat idea, and the bowl of porridge is systematically eaten, not so much, perhaps, from strictly hygienic reasoning as to its diet value as from a notion that it is a sort of special tonic or reconstructive. From this pleasant idea of a food that serves as a medicine in ordinary cases, the transition is easy to a belief in the efficacy of a medicine derived from food when the case becomes extraordinary. If the oat-grains are good in ordinary cases to prevent disease, why should not their 'essence' be potent as a restorer when disease has already made a beginning? It is not difficult to develop so taking an idea, and an essence or extract of oats has been more or less talked of as a therapeutic novelty by a certain school of practitioners. With the value of such a preparation, or the want of it, we have nothing to do at present. Our concern is with another utilization of the oat idea. For some time past public attention has been called by persistent advertising to a nostrum named 'Scotch Oats Essence.' Its extravagant claims have at last secured for it scientific attention, with a result that is most alarming. From the report of an analysis of this essence by Dr. Eccles, which appears in another part of the *Circular*, it will be seen that the inventor is possessed of more than common ingenuity, but ingenuity, unfortunately, of a most diabolical character. Under the guise of a preparation which, from its name, might be expected to be nothing worse than a harmless humbug, he is furnishing an insidious poison. With a refinement of cruelty he lays a trap for the unwary, and under the bait of oats places the bane of opium. The dissemination of such a vile concoction is a manifest menace to the public health, and naturally the question at once arises: Have we no law which will prevent such attacks on the people? Whether our present sanitary regulations are sufficient for the purpose is for the authorities to determine. If they are not, the sooner we have stricter ones the better. Meanwhile, the only immediate protection the public can have is from the pharmacist. He ought to be able to easily confirm the analysis of Dr. Eccles; which, we might add, has already been verified by another prominent chemist, and, knowing the character of the 'Scotch Oats Essence,' it will be his duty to inform any intending purchaser of its real and dangerous nature."—*N. Y. Med. Journal*, April 7, 1888.

THE DUTY ON MEDICAL SUPPLIES.—At the regular meeting of the Chicago Medical Society, February 6, 1888, the following resolutions were adopted, in response to the previous action of the Georgia State Medical Society, on the same subject:

WHEREAS, A feeling of humanity suggests that all medical and surgical supplies, instruments, and appliances, *and all foreign bound volumes upon medical and surgical subjects*, including those used in the diagnosis, as well as treatment of diseases, should be furnished to those needing them at the lowest possible price.

Resolved, That the *Chicago Medical Society urge* upon Congress, that in the cause of humanity the import duty should be removed from all medicines, medical and surgical appliances, and from every thing used in the treatment or diagnosis of disease.

Resolved, *That the Secretary of this Society* transmit a copy of the foregoing preamble and resolutions to the Congressional Committee on ways and means, and to our Senators and Representatives.

THE FIFTH ANNUAL MEETING OF THE CONFERENCE OF STATE BOARDS OF HEALTH, will be held at the Grand Hotel, Cincinnati, on Friday, May 4, preceding the Annual Meeting of the American Medical Association. The Meeting will be called to order at 7:30 P.M. Several very important questions are proposed for discussion.

THE GABRIELE BELLION PRIZE of the Academy of Sciences of Paris will be awarded annually to the one writing the best work on or making the most useful discovery in human sanitation, or for the advancement of man.

DEATH OF DR. C. R. AGNEW.—After the publication of the editorial page of this issue containing a notice of the dangerous illness of Dr. Agnew, the telegraph brought the sad news of his death last Wedneesday afternoon. A notice of his life and work will appear next week.

DR. LEOPOLD VON HOLST, for many years one of the editors of the *St. Petersberger medicinische Wochenschrift*, died recently of pyæmia.

DR. WM. T. LUSK, of New York, has been elected Corresponding Member of the Académie de Médecine de Paris, Surgical Section.

QUÆ PROSUNT OMNIBUS.—A Wisconsin paper says that a farmer in Georgia made $100 off an acre planted in watermelons, and that a physician in the neighborhood made $200 off the same acre.

PEPPER'S SYSTEM OF MEDICINE is shortly to appear in Italian.

AN ELEGANT PREPARATION.—It is said that William R. Warner & Co., recently had on exhibition in their window, 1228 Market St., Philadelphia, a pure white crystaline mass of caffeine, weighing 200 pounds, the product of ten tons of coffee. The firm uses it in the preparation of their granular bromo-soda.

THE CHICAGO MEDICAL SOCIETY at its annual meeting on the 2d inst., elected James H. Etheridge, President, and re-elected Frank Billings, Secretary.

THE MEXICAN GOVERNMENT has applied to the Health Department of Chicago for full information regarding the actual working of the Department.

CARPET-BEATING IN THE OPEN AIR has been forbidden by the Conseil de Salubrité, of Paris; they must be beaten in closed rooms, and the dust subsequently disinfected.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM APRIL 7, 1888, TO APRIL 13, 1888.

Capt. Geo. E. Bushnell, Asst. Surgeon, from Ft. Preble, Me., to Camp Pilot Butte, Wyo.

First Lieut. Wm. Stephenson, Asst. Surgeon, from Camp Pilot Butte, Wyo., to Ft. Verde, Ariz.

First Lieut. E. A. Mearns, Asst. Surgeon, from Ft. Verde, Ariz., to Ft. Snelling, Minn.

First Lieut. Wm. S. Knudler, Asst. Surgeon, from Ft. Snelling, Minn., to West Point, N. Y.

First Lieut. W. C. Borden, Asst. Surgeon, from Ft. Douglas, M. T., to San Antonio, Tex.

First Lieut. G. L. Edie, Asst. Surgeon, from San Antonio, Tex., to Ft. Douglas, M. T. S. O. 79, A. G. O., April 6, 1888.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING APRIL 14, 1888.

P. A. Surgeon Henry F. Percy, from Naval Academy and to Hospital, Washington, D. C.

P. A. Surgeon M. H. Crawford, from Hospital, Washington, D. C., and wait orders.

Surgeon J. M. Flint, from Fish Commission duty and special duty at Smithsonian Institution.

Surgeon R. C. Persons, to duty in charge of Army and Navy Hospital, Hot Springs, Ark.

Asst. Surgeon E. P. Stone, from further treatment and to duty at Hospital, New York.

Medical Director David Kindleberger, from Hospital, Washington, D. C., and wait orders.

Medical Inspector A. A. Hoehling, to Naval Hospital, Washington, D, C.

P. A. Surgeon G. E. H. Harmon, to duty at Naval Academy, Annapolis, Md.

CORRIGENDUM.

The name and address of the Secretary of the Section on Medical Jurisprudence are Charles B. Belt, Boston, Mass. His address has been incorrectly printed as Suffolk, Iowa.